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BUSINESS

TUC LEADERS will present

their 1980 economic review at

■ JAPAN'S semi-conductor in-

dustry has caught its American

O NEWSPRINT will cost about

cent in April. Page 4

AIRFIX INDUSTRIES is ex-

pected to go to the High Court

today in an attempt to end occupation of the Liverpool

O CONSUMERS spent 15 per

cent more on food in the third quarter of 1970 tinn in the same

1978 period, says the Govern-

• MAPLE AND CO. (Holdings), the furniture retailer, has advised its shareholders to

reject the takeover bid of an unnamed company which values its ordinary capital at £8.4m.

obliged to intervene in the mar-

higher German discount rate

helped stabilise the D-mark,

whileh had been weak recently.

The Italian lira lost a little ground towards the end of the

week. The French franc made

the most significant gain, followed by the Dutch guilder

and the lira. The Irish punt was

weaker, better than only the

Belgian franc.

Meccano factory. Page 6

ment. Page 4

Page 14

GENERAL

Five Lack of freed in steel has not yet Bogota hit output siege

little effect on the level of pro-duction in the rest of British Guerrillas in the Dominican Republic Embassy io Bogota released five more of their hostages hut threatened to industry after two months, the Confederation of British Industry reports. However, it con-firms the view of the parallel htow up the huitding and kill the others if their demands for FT survey of business opinion the release of 311 political prisoners and \$50m are not that confidence has been under mined. Back Page.

They are still holding dozens of hostages, including 13

Wednesday's meeting of the The five were released after a femule guerrilla, accom-panied by one of the ambas-National Economic Development Council and demaod radical changes in Government policy. Back Page. Details of sadors, had talks with two Foreign Ministry officials in a vehicle in front of the embassy. TUC proposals. Page 18

Schmidt threat

West Germany may consider rivals off guard by developing taking economic measures electronic memories claimed to against the Soviet Union as part be capable of storing four times of the West's response to the more information than the best invasion of Afghanistan, Chan- now available. Back Page cellor Helmut Schmidt said. Page 2

Soviet offensive

Soviet troops and Afgban regular army units have attacked rebel strongholds in Afghanistan's eastern Kunar province, said rebel leaders.

Khomeini home

Iranian leader Ayatollah Khomeini left hospital after treatment for a heart ailment as agreement neared on the terms under which the UN commission investigating the exiled Shah's regime will he able to see the U.S. Embessy hostages in Tehran.

Soldier critical

British soldier was critically ill in Muenster. West Germany, after a military police patrol vehicle was fired on by two gun-

Olympics appeal

An Olympics hoycotl will lead to CURRENCIES movement and a weakening of world sport, say ten British Olympic medallists in an open letter to the Government.

Rally peaceful

Three thousand police kept a National Froot auti-muzging rally through South London almost trouble-free. were just 10 arrests.

U.S. angers Israel Israel may sanction the opening of a Jewish religious school in Hehron in rctaliation for the U.S. show of support for the United Nations resolution demanding the uprooting of Jewish settlements on the occupled West Bank. Page 2

Tito still weaker

President Tito's heart grew still weaker and his doctors said in Belgrade that his general condi-

Mammoth task

Big-thinking sculptor Mibail Simeonov plans to become the first man to cast a live elephant in bronze — then make ten conies to sell at £109,000 each to raise money to help save wild-

Briefly . . .

El Greco painting, stolen from a Spanish museum last year, was found in the left-tuggage department of Madrid airport. Israell national airline, Et Al, today begins services between Tel Aviv and Cairo.

Three men were rescued by a Danish fishing boat three days after an explosion sank their hoat in the North Sea.

Five bundred were injured in demonstrations against the dis-missal of the government in India's southern Tamil Nadu

EMS February 29, 1980 5:- GRID

The chart: show the two constraints on the European Monetary System eachange rates. The upper gid, besed on the weakest currency in the system, defines the cross-rates from which no currency (ascop) the line) which no currency (ascop) the line) may move more than Ma per cont. The lewer chart gives each currency's divergence from it: 'central vate'' against the European Currency Unit (ECU), itself a basket of Eu.opean currences.

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New regime for oil and oyster 12 Computer industry... Inset

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Two-year recession and workless near 2m forecast

By PETER RIDDELL, Economics Correspondent

The UK faces a short sbarp recession over the next two years, at the end of which the inflation rate will have fallen only slightly and will still be well into double figures, while unemployment will be heading toward 2m.

The main hurden is expected to fall on industry, which has to cope with a massive erosion in its competitive position caused by rapidly rising costs and a strong pound.

No. 28,108

Industrial profits are expected to fall very sharply, and the financial squeeze on manufac-turing could be as intense as in the mid-1970s.

This picture of alutost unrelieved gloom is presented in a clutch of conomic projec-tions produced coincidentally this morning by several leading forecasting bodies outside Whitehall.

The list includes the hroadly Keynesian National Institute of Economic and Social Research, the more monetarist London Business School, the Paris Organisation for Economic Co-operation and Development, and the Confederation of British Industry.

The only relatively hright spot, and it is important both

7 per cent more this spring because of the second price in-crease in less than a year. politically and economically, is that in contrast to the mid-1970s recession real incomes and con- DOMESTIC RATES in England and Wales are likely to sumer spending should hold up reasonably well, and could even increase by an average 26 per continue to rise.

The forecasters are broadly length of the recession and, in with public-sector borrowing of the case of the OECD, about close to £10bm.

COMPARISON OF FORECASTS
Percentage change from previous year National **London Business** OECD Schoot Grass domestic -7.9 0.4 --0.7 --0.2 17.7 [4.1 0.5 7.1 1981 16.5 15.9 1.7mt -0.7 -1.8 -1.7 * Figures for Great Britain. † Figures for UK. † A "small current account surplus" is projected.

the chances of a small surplus. rather than the generally ex- Institute says that fiscal expanaccount this year.

The projections are generally

There is major disagreement about what the Chancellor

The London Business School orgues that there is no scope for relaxation of fiscal policy, greeo about the direction of and recommends a broadly

should do in his Budget.

In contrast, the National pected deficit, on the current sion of between £2hn and £3hn account this year.

The projections are generally destruction of the industrial similar. although possibly hase; reflation on this scale slightly less pessimistic, than would, it claims, make attain-those recently produced in the ment of the monetary targets

The Business School view is closest to that of Treasury Ministers. Indeed the Chancellor now hopes that, after taking account of the latest round of spending cuts and the cash limits squeeze, it will be posthe economy this year, though neutral Budget, after adjusting sible to cut horrowing to not far there are differences about the tax system for inflation. Continued on Back Page

Details, Page 18; Editorial

Commonwealth observers find Rhodesia poll 'fair'

BY BRIDGET BLOOM AND MICHAEL HOLMAN IN SALISBURY

BRITISH GOVERN- electorate." Monetary | MENT'S attempt to achieve a System currency trading was peaceful settlement in Rhodesia dominated last week by the received important support last recent rises in interest rates, night when official Commonnotably the West German and wealth observers endorsed Belglan discount rates. The Britain's handling of last week's

Belgian authorities also raised geoeral election. Treasury bill yields, but the The 11-member group. man-Belgian franc fell to its warning limit against the ECU and the dated by the Commonwealth after the Lancaster House con-Belgian National Bank was ference to observe and report to heads of Government, ket to support its currency. The declared that the three-day poll was free and fair to the extent that it provided an adequate and acceptable means of determining the wishes of the people in a manner." democratic

Last Friday, an all-party British Parliameotary delegation concluded that the election results "will fairly reflect the

Yesterday, the group of 20 former British amhassadors, morrow morning. appointed by the British Government to observe the election, publicly came to a similar conclusion.

Against an Imperfect ceasewar, all three observer groups recognise, in the words of the Commonwealth report, that it would be "unrealistic and misleading to apply conventional Vardsticks " tion in Rhodesia."

However, the three reports Governor, and of the British Government.

senior officials, including many results, to be published to-At the weekend, Bishop

Muzorewa, leader of the United African National Council, again hinted that his party might not fire in the seven-year guerrilla accept the result, while a spokeswhose 20 seats in the 100-member parliameot might prove critical to any future coalition, declared that the election could ardsticks in assessing the not be regarded as free and unique and unparalleled situatimidation."

The three reports indicate musi greatly strengthen the that the election results are band of Lord Soames, the likely to meet international acceptance, despite the criticism levelled at Britain's conduct of

The endorsement will help the poll by Mr. Julius Nyerere, Lord Soames to overcome the the Tanzanian president, among general wish of the Zimbabwean objections of any political party others.

Cabinet warned on bank profits BY ELINOR GOODMAN, LOBBY STAFF

responsible for co-ordinating the Government's communications, has sent his Cabinet colleagues a confidential memorandum warning them of the political sensitivity of the bank's windfall profits and advising them on how best to answer questions about them.

The memo reflects discomfort among Ministers over the size making as a result of high in policy. terest rates. Discreet pressure may be put on the backs to believe it might be possible to used to guarantee loans from use some of their profits to help persuade the banks to use some the banks to small companies

Within the last month, both risk

Lloyd's have reported greatly starting up.
increased profits, with Lloyds' The Government is already profit on its UK business up 90 setting up a small business loan per cent. Some Conservative guarantee fund, as suggested by demanded action to curh these peatedly called for over the last profits, but any formal move towards either directing banks' ness lobby.

profits into particular kinds of Ooe idea now being floated profits into particular kinds of investment or taxing them within the Department of In-would seem to be in direct conwould seem to be in direct con-

of the profits clearing hanks are tradiction to Conservative party be persuaded to collaborate with

of their profits to finance higher

MR. ANGUS MAUDE. Minister National Westminster and among small companies just

backbenchers bave already the Wilson committee and refew months by the small busi-

Nevertheless, some Ministers such a fund, which would be that would not normally get one. business. particularly Budget incentives likely Page 4

Petrochemicals boost predicted

BY SUE CAMERON, CHEMICALS CORRESPONDENT

rate of 4 per cent a year in the next ten years, said a report by Shell International Chemical at the weekend.

The group says the report is

a direct contradiction of some is enough West European pro-pessimistic forecasts of the last duction capacity to meet the few years which predicted a decline for the industry.

chemicals, such as plastics, for traditional ones from glass and steel. It estimates that the petro-

cent a year in five years. It does not expect growth of the cheorical sector to lead to heary investment in new plant. projected rise in demand until at

There will continue to be opportunities to substitute rate forecast by Shell compares materials made from petro- with an increase in the petrochemicals industry of only 6.8 per cent a year between 1974 and 1978. The report says that the main reason for this was a chemicals industry will be able poor investment climate and a generally depressed economic to grow at 1.5 per cent a year ahove the annual increase in growth rate. industrial production, and The report is based on a

SALES of petrochemicals in expects industrial production to detailed survey of industries Western Europe will grow at a grow at an average of 2.5 per that use petrochemicals for other products. Main industries studied were packaging, construction, tex-tiles and transport, which

between them account for about 60 per cent of petrochemicals consumption in Western Europe. Relative cost was found an important factor in the manufacturers' decision to use petro-chemical-based materials instead

of traditional ones. Though petrochemical prices rose substantially since the oil crisis of 1973, they were still competitive. There was no significant cridence of manufacturers going back to traditional

Continued on Back Page

West to stage fake oil crisis

By Ray Dafter, Energy Editor

THE main Western oil consuming countries are to fake an energy crisis later this year to test their emergency oil-sharing plans. The exercise, organised by the International Energy Agency, will be the most ambitious test of its kind. It will last two months and

cost millions of pounds. For the first time all 20 member countries of the IEA are expected to take part, as well as more than 30 major oil companies. Dr. Ulf Lantzke, director-general of the agency, sald it was hoped member countries would also take the opportunity to test their individual emerg-ency procedures.

which will not affect fuel supplies to the public—is to see how the West could cope if their was another serious disruption to world supplies such as in 1973/74 with the Arab oil embargo and, to a lesser extent, in 1978/79 with the Iranian crisis

The IEA's emergency oilsharing system is triggered automatically if any of its members' normal supplies are cut by more than 7 per cent. Since the IEA was formed in 1974, disruptions have not been serious enough to activate such procedures, although Sweden came very near to it early last

There will be four main objectives of the test, to be held in October and November. Continued training in use of the sharing system for govern-ments, the oil supply industry and the IEA secretariat;

 Assessment of how the IEA system relates to European Community emergency plans:

Assessment of the IEA system's reaction to unconventional supply disruptions, including a "creeping" crisis.

have not taken part in any test: But the IEA management team reported at its meeting on February 4 that it hoped all 30 countries would take part this year.

Netherlands, New Zealand, Soverning capital movements.

Norway, Spain. Sweden, For the first time, Japanese Switzerland, Turkey, United Kingdom and the United States.

Japan moves to bolster the yen

BY RICHARD C. HANSON IN TOKYO

lete last night announced a their bome offices, on an inter-major plan to defend the value bank transfer basis. This will of the yen. As part of a package agreed with the U.S., Switzerland and West Germany, the New York Federal Reserve is to belp support the yen by using its own account and hy making use of an existing \$5bn foreign exchange swap facility with

The Japanese announcement, made suddenly by Mr. Noboru Takeshita, the Finance Minister, late on Sunday night, disclosed important measures to encourage the flow of capital to Japan, particularly from the oil-produc-

Japan.

ing countries. The Ministry was compelled to act after another sudden drop in the yen's value on Friday in overseas trading. In New York, it slipped to nearly 252 to the dollar from slightly higher than 250 yen in Tokyo. Some private bankers con-

tacted after the announcement said the measures would cer-tainly "shock" np the yen in value, perhaps by five or six-yen initially. On the longer view, however, the market believes the Govern-

ment may be forced to take other steps—most notably to increase domestic interest rates The Finance Ministry plan consists of the following main

points: • The monetary authorities will continue their forceful market intervention in defence of the yen. It is believed the Bank of Japan last month sold

year ago. Testing improvements and changes to the system since the last test in spring 1978.

The IEA has so far mounted two exercises. The first, in autumn 1976, involved only oil companies and the agency's secretariat. The 1978 test involved civil servants from 18 of the member governments.

So far Turkey and Australia have not taken part in any test to accept the election.

To facilitate its market may be needed. The rate was intervention, the Japanese increased by 1 per cent the Government has won the cooperation of the Swiss. West Government has won the cooperation of the Swiss. West Government has and Americans. In practical terms this means the official discount rates may be needed. The rate was intervention, the Japanese increased by 1 per cent the operation of the Swiss. West Government has won the cooperation of the Swiss. West Government has and Americans. In practical terms this means the official discount rates may be needed. The rate was intervention, the Japanese increased by 1 per cent the operation of the Swiss. West Government has won the cooperation of the Swiss. West Government has won the cooperation of the Swiss. West Government has won the cooperation of the Swiss. West Government has won the cooperation of the Swiss. West Government has won the cooperation of the Swiss. West Government has won the cooperation of the Swiss. West Government has won the cooperation of the Swiss. West Government has won the cooperation of the Swiss. West Government has won the cooperation of the Swiss. West footh to 7:12 per cent the operation of the Swiss. West of the month to 7:12 per cent the operation of the Swiss. West footh to 7:12 per cent the operation of the Swiss. West of the month to 7:12 per cent the succession of the Swiss. West footh to 7:12 per cent the operation of the Swiss. West footh to 7:12 per cent the operation of the Swiss. West footh to 7:12 per cent the succession of the Swiss o presesd its willingness to activate a \$5bn swap line which the Japanese could use to bolster the yen. This was originally established as a line of defence for the dollar.

The 20 are Australia. Austria, To encourage the inflow of Belgium, Canada. Denmark, capital, the Finance Ministry West Germany, Greece, Ire-land, Italy, Japan, Luxembourg, major liberalisation of rules

APAN'S Ministry of Finance deposits from these branches to eliminate the need to convert Euroyen deposits into Euro-dollars. Deposits in Japan will carry Euroyen interest rates.

 Japanese banks will be able to offer central banks, govern-ments and international institutions flexible interest rates on free yen deposits (i.e., those beld by non-residents). This is similar to what the Swiss authorities have recently allowed central banks, and is specifically aimed at attracting deposits from Arab oil produc-ing countries. Until now all free yen interest rates have been strictly controlled.

Aiso with an eye to the Arab oil producers, Japanese com-ponies will be allowed, for the first time, to float yen-denominated private placement bonds overseas. This will help meet greater demand from the oil producers for ways to diversity their investments in Japan.

The Finance Ministry has dropped restrictions on Japanese banks making mediumand long-term foreign currency loans to Japanese companies. once the exclusive reserve of the foreign banks operating in

The initial reaction of private bankers was that the measures are partly of a stop-gap nature necessitated by market pres-

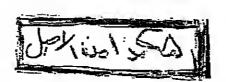
Other measures which the Government might wish to take (such as another increase in interest rates) will be delayed about \$1hn to hold the yen by Parliamentary hearings on above 250 a dollar. This the Budget, brought the foreign reserves If the authorities want to

down close to the \$20bn level ensure that the yen defence at the end of February, from package will have a listing more than \$30bn just over a impact, it is felt further steep rises in official discount rates

> thought here to be a major factor in the present market because of widespread use of the forward discount in yen trading.

f in New York Feb. 29

Who is lift trucks.



U.S. vote on settlements angers **Israelis**

By Our Tel Aviv Correspondent

ISRAELI LEADERS reacted angrily yesterday to the U.S. show of support for Saturday's United Nations' resolution which demanded the uprouling of Jewish settlements on the

retaliatioo. Such retaliation, it believed, could be expressed in

Since an Israeli soldierstudent was shot io Hehron last month, Israeli extremists have been pressing the Government to permit Jews to take up residence inside the city, something not permitted in 13 years of Israeli occupation. Unlil now, the Government

has demurred at approving such a move in dehance of U.S. wishes. But it is thought that the new mood of Ministers after last night's American vote could he in favour of establishing religious

school in Hebron.

The matter would have been taken up hy the Cabinet yesterday, but for a snowstorm which cut off Jerusalem and made a meeting impossible. The Cab-inet aession will now he held tomorrow and strong reaction to the U.S. move is expected,

Mr. Dan Pattir, spokesman for Mr. Menachem Begin, the Prime Minister, expressed disappointment at the U.S. votc. It came as a shock, Mr. Pattir said, because, although U.S. opposition to Jewish settle-ments on Arah land is well known, the U.S. Government has the construction and coming on-have existing Jewish settlements stream of new nuclear plants uprooted from the West Bank, until 1985, provided there are Other Israeli officials said assured facilities for the interim Israel not only had a right to storage of nuclear waste, settle on the West Bank, but After 1985, the states will

troops vesterday, doctors re-ported. The dead were said to Government an important include two Lehanese civilian breathing space in its energy passers by, while the others programme and ensures that a

Ford ready to battle for White House nomination

BY JUREK MARTIN, U.S. EDITOR IN WASHINGTON

FORMER President Gerald Ford, convinced that Mr. Ronald Reagan cannot be elected President of the U.S., yesterday indicated that if a hroad crosssection of the Republican party were lo approach him he would run again for the White House. In an interview with the New

Feeling was reported running high among Government Ministers and some officials of the control o Ministers and some officials Mr. Reagan "can win the predicted an early gesture of retaliation.

Such retaliation. it is Presidential nomination. "I hear more and more often,"

a Cahinet decision to permit the he said. "that we don't want npening uf a Jewish religious can't afford a replay of 1964" school in the occupied Arab City of Hebron.

Barry Goldwater went down in a landslide to President Lyndon Johnson.
The momentum Mr. Reagan

gained from his hig win last week in the New Hampshire primary appears to he spilling over ioto neighbouring Massachusetts, which stages its primary tomorrow. A Boston Globe poll published yesterday placed Mr. Reagan only three and New York later this month. gressman John Anderson or any-points hehind Mr. George Bush, Mr. Ford has heen comfort-the crstwhile front-runner and able in his retirement, enjoy-aside in Mr. Ford's favour.



statesman native New Englander who had been counting on an easy paign then moves on to Mr. Reagan's natural territory in the south hefore hitting the hig industrial states of Illinois and New York later this month. gressman John Anderson or any-

ing his role as elder statesman and avid golfer. After much vaciliation, he said in the middle of last year that he would not contest the early primaries, though be has never ruled out accepting a draft for the nomination.

But as he half-admitted in his

interview, and as recent American political history has invariably demonstrated, those who stand and wait rarely eod up with the Presidential nomination. If Mr. Ford delays declaring his intentions much longer, he will not he able to enter many primaries, in which candidacies must be filed early. In the meantime, Mr. Reagan might well he able to huild up an insurmountable lead in advance of the later western primaries, above all in his home atate of California, in which he

reckons to do especially well. Moreover, Mr. Ford's pntative strategy also requires the complicity of other contenders-and there is no indication at this early stage that Mr. Bush or Senator Howard Baker, Con-

Schmidt pact on nuclear waste

BY OUR BONN CORRESPONDENT

Premiers have agreed with Chancellor Helmut Schmidt on new guidelines for the disposal of nuclear waste. This is an important step lowards hreaking the deadlock over Bonn's nuclear energy plans.

Under the agreement the states will be able to approve stream of new nuclear plants until 1985, provided there are

settle on the West Bank, but needed to do so for security reasons.

Reuter adds: At least six people were killed in beavy fighting between Palestinian commandos and Lebanese army troops vesterday doctors re-

This understanding gives the were believed to be Palestinians, i nuclear "gap" will not develop

GERMANY'S state over the next five years. nuclear "park" at Gorlehen, Lower Saxony, which would provide comprehensive storage and reprocessing facilities. That would have met the statutory requirements that eacb new nuclear power station can only be given the go-ahead if there is an appropriate plan for permanent waste disposal.

> Problems arose last year when Christian Democrat-controlled Lower Saxony rejected the Gorleben scheme as politically unacceptable after local and national protest.

hullding of nuclear power a year, stations might he delayed indefinitely and that existing ones would have to he shut, forcing Gerniany into even deeper dependence on imported oil. These anxieties have not been ments.

dispelled entirely hy the new Until now, Bonn has urged guidelines, as they ahelve the the huilding of an integrated problem of bow and where problem of bow and where nuclear waste can be stored permanently or disposed of. But Lower Saxony has said it is willing to supply a site for the permanent storage of nuclear waste, provided that test drillings confirm that the chosen area is

The state of Hesse has heen actively encouraging plans for nuclear fuel re-processing plant. A consortium of West filed a preliminary application to build a re-processor which This raised the fear that the about 350 tonnes of spent fuel

If the plans are approved, the plant could be in action in five to six years, coinciding with the 1985 deadline set by the federal and provincial Govern-

Lax Dutch N-security helped **Pakistan**

By Charles Batchelor

AN embarrassing official report just released abows that lax security at Dutch nuclear installations prohably allowed Pakistan to steal secrets which would allow it to develop nuclear weapons.

The report, prepared by officials from four Government ministries, revealed it was highly likely that Dr. Ahdul Qader Khan, a Pakislani metal-lurgist who worked on uranium eorichment technology in the Netherlands, smugglad secrets out of the country. It also showed that Pakistan was able to order equipment from Dutch companies which could he used in the uranium enrichment

In a 41-page memoraodum sent to Parliament the Ministers of Economics. Foreign and Home affairs and Justice revealed that the secrets leak was much more serious than was at first thought. The Dutch Government originally claimed that only unimportant information had been passed to Pakistan.

The report is emharrassing for the Netherlands, which has alwaya taken a strong line against the proliferation of nuclear technology. Pakistan has not signed the nuclear non-proliferation treaty.

The report has already heen sent to the British and West German Governments, who are partners in the uranium enrich ment programme. "It is clear that the Government deeply regrets what happened," said the report, which will he dehated in Parliament.

Dr. Abdul Qader Khan worked for several months in 1972-75 for Ultra - Centrifuge Nederland, the Dutch partner in the three-nation venture. It has an enrichment plant at Almelo in the eastern Nether

lands. The report recommenda a tightening of security at Almelo and among the suppliers of sen-altive materials and equipment. Gontrols on the export of knowhow will he increased and the list of strategic materials dating back to 1963 will he revised.

\$314m IMF credit for **Philippines**

THE International Monetary Fund has approved a stand-by credit of 410m special drawing rights (\$314m) for the Philip-

rights (\$314m) for the Philippines. It may be drawn between now and the end of 1981.

Of the total, 333m SDRs will he from the fund's relatively new 7bn SDR supplementary financing facility and the rest from ordinary tranche drawlbgs. The Filipino quota in the fund is 210m SDRs.

The supplementary facility is

The supplementary facility is of longer term than all normal tranche drawings but more expensive as it is directly linked to market rates. It is still significantly cheaper than horrowing from commercial

The new stand-by is the outcome of meetings in Washing-ton in December at which the IMF seems to have listened sympathetically to the Filipino case. Conditions for the loan have not been diaclosed but they are not thought to he any more onerous than those Manila was onerous than mose manna was facing under an existing ordinary tranche stand-hy and for those on horrowings under the extended fund facility which came to an end last

Originally the Philippines is believed to bave been boping for a new atand-hy of 600m SDRs. But generally it has done well out of the fund, which is also understood to have agreed that the country's commercial horrowing ceiling for 1980 should he raised to \$1.2hn from \$975m last year. The Phillppines is also availing itself of pines is also availing itself of 90m SDRs under the compensatory financing facility.

Bourguiba names a Premier

By Susan Morgan in Algiers

PRESIDENT Habib Bourguiba of Tunisia bas appointed Mr. Mohammed Mzali, aged 55. o-ordinate Government activity and to act as interim Prime Minister. Mr. Hedl Nouira, Prime Minister for the past decade, was incapacitated by a stroke last week.

The crisis comes at a delicate stage for Tunisla. A month ago a Libyan-sponsored attack was made on the southern Tunisian mining town of Gafsa. But a specially convened meeting of Arab League Foreign Ministers last week failed to endorse Tunlsian claims of Libyan aggression.

It is clear that, even if he recovers, Mr. Nouira, who was the designated successor to President Bourguiha, is un-likely to re-enter political life,

Bonn may take economic measures against Russia

BY ROGER BOYES IN BONN

may consider taking economic measures against the Soviet Union as part of the Western response to the invasion of Afghanistan.

The Chancellor's statement, made during a weekend speech, was deliherately vague and carefully combined with a warn-ing against escalating East-West tension and a fresh commitment to solidarity with the U.S.

But the comments clearly show the Chancellor is deter-mined to clear the sir hetween Bonn and Washington hefore he flies to the U.S. tomorrow.

America has been urging Bonn to limit its export credit guarantees for trade with the Soviet Union as a gesture of economic solidarity with the U.S. So far, Bonn has resisted any radical reform of the system, arguing that German husiness with the East would applied to the gradity guarantees. collapse if credit guaranteea were stopped.

Bonn's economic aupport for the U.S.—apart from directly strategic measures, such as shoring up Turkey—has thus heen confined to a pledge not to take advantage of any trade lost hy America because of emhargo

measures. Over the past week the Chancellor appears to have deliberately set out to dispel U.S. anxieties about Bonn's support for the alliance. He announced last week, for

should allow Herr Schmidt and President Carter to focus on the Afghanistan crisis without the distraction of intra-alliance

CHANCELLOR Helmut Schmidt example, that the defence German officials, who believe has for the first time publicly declared that West Germany the NATO target of a 3 per cent settled within the Alliance real increase.

This, coupled with a general withdrawal be considered as a willingness to consider some pre-condition for East-West form of economic sanction, negotiation and, second at what point does pressure on Moscow become counter-productive?

Overall plans for strengthen-ing the West's position in the Gulf, the Middle East and Asia That is the earnest hope of will also be discussed.

Britain seeks non-aligned support for Afghan plan

support from the 86-nation non-aligned movement for its pro-posal for a neutral Afghanistan Indian views that Kabul ahould posal for a neutral Afghanistan during talks in London today with an emissary of Mrs. Indira Gandhi, the Indian Prime Minister.

India has taken a common stand with Yugoslavia and Algeria—partners on the nonaligned movement—to reject any neutralisation based on super-power guarantees as this is seen as infringing Afghan sovereignty.

Gonsalvea, a aenior Indian Foreign Office official, who has Ottawa, that the European Community's formula for

BRITAIN WILL seek wider Afghanistan's future status is

remain non-aligned.

The risk of a spill-over of the
Afghan conflict was underlined at the weekend by violations of Iranian and Pakistani airspace by Soviet aircraft. Iran said two MiG fighters and a helicopter flew over the border in north-eastern Iran on Saturday. Pakistan said its own fighters

fired warning shots.
Our Foreign Staff adds: Dr. overeignty.

Bruno Kreisky, the Anstrian
Britain will tell Mr. Eric Chancellor, yesterday suggested
consalves, a senior Indian that the non-aligned nations should ask their current chairalso visited Washington and man Dr. Fidel Castro of Guha what be is doing to protect for Afghanistan'a status.

Giscard bid to boost Gulf ties

BY ROBERT MAUTHNER IN KUWAIT

the grouodwork for closer Arab rulers. economic and political co-operation between the Euro-operation between the oiloperation between the Euro-pean Community and the oil-producing Gulf States, during an official visit which M. Valery Giscard d'Estaing, the French President, is now paying to the

It is the first time that any French President has visited the Gulf States, and both sides have stressed that the talks which M. Giscard will bave in Kuwait, Bahrein, Qatar, the United Arab Emirates, Jordan and Saudi Arabia will be important politically and econ-omically.

dent's itinerary, to replace a of the Palestinian cause and visit which M. Raymond Barre, hope for a French initiative to visit which M. Raymond Barre, the French Prime Minister, was due to have paid to the Arab kingdoni on Fehruary 23. M. Barre's visit was postponed because of King Khaled's Illness, but the king has since recovered sufficiently to receive

visitors. The President's visit to Saudi Arabla is not official, but be will have one day of private discussions with both King Khaled and Crown Prince Fahd

FRANCE will attempt to lay of M. Giscard's talks with other prices, it has become clear that the Arab-Israeli conflict and the future of the Palestinian

people figures bigh on M. Glscard's agenda. During the talks which M. Giscard bad at the weekend with Al-Sabah, the ruler of Kuwait, and Sheikh Saad Al-Abdulla Al-Sabab, the Prime Minister and Crown Prince, his Knwalti hosts emphasised they were more concerned about the problem than

Afghanistan.
The Kuwaitis regard France Saudi Arahia was added at the last moment to the Presi- as the main Western supporter as the main Western supporter break the deadlock on this problem. Persistent rumours that M. Giscard may meet Mr. Yassir Arafat, leader of the Palestine Liberation Organisa-tion, during his stay in Jordan, bave been neither confirmed nor

denied. Mr. Arafat has said he would meet the French president only in Paria or in his "own country." It is not certain whether Jordan would meet this condition.

on March IO. The two sides will have an opportunity to Giscard is discussing during his exchange viewa on the results tour is how the proposal, made



M. Giscard: Gulf security a

by the Emir of Kuwait in June 1979, for a Euro-Gulf dialogue, can be given concrete form.

In Kuwait, the French President and his hosts have been talking about the possibility of associating the developing countries with the European Community, the Guif States and

possibly, Saudi Arahia. terms of an agreement which would cover the security of oil supplies, two-way industrial investments in Europe and the Gulf, and aid to developing countries.

The importance of M. Giscard's visit to the Gulf is underlined by the fact that be bas brought four Ministers with

Reuter adds: Kuwait would be prepared to sell oil to the Soviet Union and other East European countries, the State's Oil Minister said yesterday.

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W. Germany finds cost of UK oil most expensive

BY ROGER BOYES IN BONN

BRITISH OIL exported to West show that Britain, Germany's Germany last year was more expensive that the crude sup-

latest oil import figures released by 36.7 per cent to £4.2bn—by the German Economics Minmore at DM307.70 per tonne though thet figure was still istry and will shore up Bonn's while Norway, another North significantly below the sterling case that Britain, as a feilnw- Sea producer and Bonn's ninth £5.7bn imports (cif) from West EEC member, is charging too most important aupplier, Germany.

much for its oil. Britain has charged DM304.21 per tonne.

The figures indicate that creased.

show that Britain, Germany's The higher oil prices bave fourth most important supplier clearly swollen the Anglo-West (after Saudi Arabia, Libya and plied by any other top produc-ing nation apart from Libya and DM 290.73 (£72) per tonne of released by the British Embassy crude compared with DM 210.66 in Bonn. British exports (fob) This picture emerges from the (£52.5) in 1978. Of the OPEC

argued that it bas been follow— The figures indicate that ing oil price trends rather than Britain charged below the leading the market and that, in average price of the 12 top materials and chemicals, Britain any case. North Sea oil is of e exporters to West Germany in particularly bigh quality and 1978. Lest year, bowever, it should be appropriately priced. The West German figures of DM 279.50 per tonne.

German trade figures, a detailed analysis of which has just been to West Germany rose last year

Thanks largely to the increased sales of oil, raw managed to increase its share market to 9.9 per cent from 8.3 per cent

Quota test seen for GATT body

BY BRIT KHINDARIA IN GENEVA

the Common Market over syntheuc fibres, steel, Italian shoes end certain poultry products tests of willingness to properly could be a blessing in disguise apply Tokyo Round codes," a for the Tokyo Round package. Although the dispute settle-ment machinery of the General Agreement on Tariffs and Trade

(GATT) has not yet been called into ection by either side, diplomats here expect that at least thetic fibres quotas-will come

up under GATT'S dispute settle-

THE ROW between the U.S. and ment procedures they could be blessings in disguise because they will provide the first major

So far both the U.S. and the Community bave kept their disputes out of GATT, awaiting the results of bilateral negotiations between themselves. If either one of the conflicts-over syn- side is left dissatisfied it can complain to GATI's decisionto GATT experts for arbitration. making council and ask for the If the verious agreements do creation of a disputes settlement

panel.
It is not yet clear which pro-

visions of GATT and the newlyconcinded Tokyo Round package of trade agreements would be involved. The community bas allowed Britain in curtail im-ports of synthetic fibres from U.S. under GATT's safe

guard clause—article 19.
The clause allows any GATT member to curb imports from any other provided that the im-ports clearly hurt domestic producers. The U.S. is expected to make a bid in the GATT council for compulsory compensation from the Community if

Poland signs deals with Britain

PINANCIAL TIMES REPORTER

chiefs, led by Mr. H. Bakto- grede coals. siewich, the Minister for Power and Atomic Energy, left London followed visits to GEC Power at the weekend after a visit to Engineering, Bebcock Power the UK in which they signed co-and Northern Engineering Industries operation agreements with the dustries. Electricity Council and three The p British companies.

tricity chairman, allows for the exchange of scientific and technical information leading to joint research projects on the automation of power stations, bed combustion process. combined heat and power pro-

The framework agreements

The party also attended a presentation on fluidised bed The agreement signed with combustion at the National Coal Sir Francis Tombs, the Electricity chairman, allows for the Its last call was to Foster Wheeler Power Products, a company which has pioneered the commercial use of the fluidised

Poland bas large amounts of

Cunara Building,

KINGDOM OF DENMARK U.5.525.000.000 512% 20 YEAR EXTERNAL LOAN OF 1964

15173 22151 m for payment o

SCOTTISH EQUITABLE LIFE ASSURANCE

LECTURES

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GRESHAM LECTURES in Law

The Modern Conflict of the Law

3 one-heur lectures at The Greenam College, Basinghall Street, London EC2 at 6.00 pm. March 5, 13 and 20

March, 1980.

A CROUP of Polish power jects and the burning of low low-grade brown coal, mostly open cast, available and is looking to Britain for know-how on the fluidised bed combustion principle in boilers.

This offers efficient conversion to heat using lignite and other low-grade coals while retaining sulpbur dioxide and preventing atmospheric pollu-

Mr. Derek Hugh, the Foster Wheeler's export sales and marketing director, said it was boped that some sort of agreement for co-operation would emerge following the Polisb Minister's visit.

COMPANY NOTICES

CANADIAN NORTH ATLANTIC STBOUND FREIGHT CONFERENCE CANADA-UNITED KINGDOM FREIGHT CONFERENCE

NOTICE TO SHIPPERS AND IMPORTERS
FUEL COSTS
The member lines of the above conferences operating services between the United Kingdom. Nerthern Ireland and Line Republic of Ireland and Caraviran Members of the Continues of the Co

per ton measurement | Freighter

ter Liners Ltd. ! Cross Line Ltd. !

INCO LIMITED NOTICE OF RECORD DATE

EDUCATIONAL

LANGUAGE COURSES

LEGAL NOTICES

BANQUE DE CREDIT INTERNATIONAL EN LIQUIDATION CONCORDATAIRE EN LIQUIDATION CONCOROATAIRE
Conformément à l'Article 43 de
l'Ordennance du Tribunal Fédéral du
11 avril 1935 concernant la procédure
de concerdos pour les Banques et les
Caisses d'Epargne. les liquidatours ont
drasas un àtat du parrimone réalisé
et non ancore réalisé eu 31 décembre
1979 et un rapport sur laure activités
jusqu'é cotte dete et les ernt transmis
à la Commiseion des créanciers pour
être cemmuniqués à l'autorité de
concerdet.

concerdat. Les créanciers peurront en prendre connaissence ou Siège principel da la

conneissence or Siège principal de la Benque.

15, rue du Jeu-de-l'Arc. 1207 Genève.
Genève. le 27 tèvrier 1980,
GELOTTE HASKINS & SELLS S.A.
CLAUDE MOREILLON
CHARLES WINTSCH
The tollowing is a "free " translation
of the about efficiel notice:
INTERNATIONAL CREDIT BANK,
GENEVA GENEVA IN LIQUIDATION UNDER SCHEME OF ARRANGEMENT

UNDER SCHEME OF ARRANGEMENT In accordance with Article 43 et the Ordinance of the Federal Tribunal of 11th April 1935 regarding the precedure in Schemes ef Arrangement for Banks and Savinge Banks, the Uquidators have drewn up a Swidment ef Assets Realised and not yet Rentiaed as at 31st Occamber 1979 and a Repert en their Activities up to that data and hous ferwarded them to the Cemmittae of Crediters for transmission te tha Authority ef the Scheme of Arrangament.

ment.
Creditors may inspect these at the fleed Office of the Bank, 15, rue de Jau-de-l'Arc, 1207 Geneva.
Geneva. 27th February 1300.
The Liquidators:
DELONTE HASKINS & SELLS S.A. CLAUDE MOREILLON CHARLES WINTSCH

THE CRIMPANIES ACTS 1948 TO 1976
HOLDWROO INTERNATIRINAL
(COSMETICS) LIMITED
NOTICE 18 HEREBY GIVEN, pursuant NOTICE IS HEREBY GIVEN, pursuant to section 293 of the Cempenies Act 1948, that e Masting el tha Creditors of the above-nemed Company will be held at Winchester Heues, 100 Old Broad Street, London, EC2, on Tuesdey, the 18th day of March 1980, et 12 noon, for the purposes mentaned in sections 294 and 286 of the said Act.

Osted this 20th day of February 1980, By Order et the Board,

J. HAYWINII. Director.

TRAVEL

DIAMONDS FOR INVESTMENT

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India to boost oil

intake from **USSR**

NEW DELHI-India will import 1.7m tonnes of petroleum products from the Soviet Union this year under a contract signed between the Soviet Sojunest Export Com-pany and the Indian Oil Corporation.

The contract provides for the import of 900,000 tonnes of kerosene and 800,000 tonnes of diesel off, and the Soviet Union is likely to supply an additional 500,000 tonnes of diesel oil to Indie this year. India has already contracted to import L5m tonnes of crude oil from the Soviet

Union in 1980. Meanwhile, Indian Govern-ment officials said Algeria will consider supplying crude oil to India from next year, and negotiations are under way for the import of 250,000 tonnes of petroleum products from Algeria this year. India's total import require-

ment for 1980 is 16.5m tonnes of crude and 6.Im tonnes of refined products. Reuter

BIRMINGHAM TRADE FAIR

India puts its industry on show

ft should also illustrate the supply of semi-finished com-largely ignored potential for ponents. However, there bava joint venture deals between the been problems recently over two countries.

As the world's ninth most inthis week at the National Exhi- development funds. bition Centre near Birmingham.

The fair is one of many which the Trade Development Authority of India bas staged recently—in the U.S., West Ger-many and Denmark—but for the first time consumer goods are excluded and engineering products are being taken to the beartland of British industry.

The Trade Authority suggests that many of the products on show are those which have become unprofitable to produce in developed countries because of their relatively low added value and high labour input. Research bas shown that there is a large market in Europe and the U.S. for these products.

fair in Britzin, to be opened to now prepered to devote their day by Mr. John Nott, the Trade whole output of goods to a single Secretary, mey be seen by some buyer's specifications, notably in UK companies as a Third World the industrial fastenings sector, challenge in their activities, but and many specialise in the

The Indian export effort bas dustrialised nation, India bas been encouraged by financial developed a substantial light aid from the Swedish International Development Authority, wants to demonstrate the improved quality of its products hibition, and by UN trade

> But another purpose of the exhibition, aside from ensuring that the growth of exports con-tinues in line with increasing production capecity, is to draw the attention of British com-panies to the type of goods which can be manufactured under joint ventures in India, often for sale in third countries.

Mr. Pradeep Larois, the Trade Authority's West German-based Europeen director, said that UK companies could benefit considerably by providing tech-nology and equipment, often outdated by Western standards and of little value, for low-cost production in India. Although Indian law prohibits foreign will come in form of dividends panies.

lishment of a joint venture marketing company in the UK or elsewhere means that British compenies can have complete control over sales in third countries.

The most promising areas for exports are seen as the Middle Eest. Mr. Laroia said that one UK company was now investing around £1m in two plants to manufacture industrial fasteners in India, and more deals were

share in the joint company, JCB-Escorts, which will produce e modified model of an excavetor loader, initially with about balf the components supplied from the UK, and later as a wholly

about 80 a year, building up to in India at first, but there is £3bn last year, illustrating its provision under the agreement emergence as an industrial for exports at a later stage. force which should not be

INDIA'S FIRST industrial trade Some Indian companies are mejority ownership, the estab- paid by the joint company. Due to import controls there are being sold in India at present, India's exports of engineering goods to Britain have risen rapidly in the past two years

from around £11m in 1977-78 to £18.3m last year, and the Indian Engineering Promotion Council believes that this figure will con-Products selling particularly well- are band tools for measur-

ing, woodworking, metal cutting The Staffordshire company, and hand-forced tools such as panners, wrenches and pilers. £250,000 in a joint venture with Annual export growth of these Escorts, a major Indian comproducts to world markets has pany. JCB holds a 40 per cent been about 45 per cent a year since 1970.

Motor components are now being supplied to the U.S., West Germany, France, Sweden and Britain, with the annual value production now at around domestic product. £140m. Machine tools worth.
Initial production will be more than £10m are exported

Overall, India's sales abroad around 250 e year under a pro-gramme phased in over five have grown in value from about years. Sales will be exclusively £350m in 1960 to more than JCB's returns from the venture underestimated by British com-

World Economic Indicators

		UNEMPL	OYMENT		
		Feb. '80	jan. '80	Dec. 79	Feb. '79
UK	000'5	7,383.1	1,338.8	7,294.6	1,362.6
	%	5,7	5.5	5.3	5.7
	1	Jan. '80	Dec. 79	Nov. 79	Jan. 79
Germany	000's	1,036.5	866.8	799.0	1,171.4
	%	4.5	3.8	3.5	5.1
Holland	2°000	232.4	216.7	209.5	229.0
	%	5.5	5.2	5.0	5.5
Staty	000's	1.681.0	1,662.9	1.623.0	1,730.6
/	%	7.8	7.7	7.5	8.0
France	2'000	1,485.4	1,468.9	1,472.7	1,356.2
	%	6.7	6,6	6.7	6.1
Belgium	000°s	. 361.7	366.8	368.2	344.8
	. %	. 9.1	9.2	9.2	8.6
U.S.	000's	6,425.0	6.087.0	6,039.0	5,883.0
	%	6.2	5.9	5.8	5.8
	<i>7</i> €	Dec. 79	Nov. 79	Oct. 79	Dec. '78
	4.54	DEL 27	140.	- LL 17	

SHIPPING REPORT

Tanker outlook still depressed

BY WILLIAM HALL, SHIPPING CORRESPONDENT

closure that a very large crude cargoes in the Gulf are virtually carrier (VLCC) had been tied laid-up, and the news that the

at \$0.52 per ton. depressed the industry is at the

ONE OF the gloomiest pieces of as to whether the ship would be about the outlook for VLCCs. news for the world tanker better laid-up.
industry last week was the disMany of the ships awaiting

up for a 12-month time-charter Tung Group is bringing one of at \$0.52 per ton.

Tung Group is bringing one of its VLCCs, Brazilian Faith, out This compares with rates of of lay-up in Brunel Bay and \$2.50 per ton last November and sending it to the breakers' a graphic reminder of just how yards, indicates what some owners think of the market. moment. At these rates, the John I. Jacobs, in its latest ports continue operator is certainly not break- World Tanker Fleet Review, for 20,000-60,0 ing even and it is a moot point finds it hard to be optimistic the U.S. Gulf,

According to Jacobs, demand for ultra-large crude carriers (ULCCs) and VLCCs could be reduced by 10m-20m tons this year, and we may not see 1979 levels of demand return again until 1982.

By contrast, the dry cargo market is looking remarkably buoyant. Denholm Coates reports continued good demand for 20,000-60,000 tonners from

'The more I solve other people's space problems, Mr Wagstaff, the worse I make my own!'

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'Sounds as though you're doing

'Maybe. But we're so busy we're running out of warehouse space. It's a real headache I can tell you.

Well, according to our records your father had the same headache several times in the forty odd years Clark & Son have been banking with us. He survived all right, so I'm sure you will! But didn't you have your eye on those premises George Field recommended?

Turned out too expensive, I'm afraid. Would've suited me down to the ground-and into the ground! I've learned to watch my cash flow like a hawk, thanks to you.

Well I think we may be able to ease your cash flow situation by solving your other space problem.

'Which one's that, Mr Wagstaff?' Breathing space, Mr Clark. Time to pay for your new premises in other words. I think that's what you need. Why not call in at the bank and let's talk about it.



Wagstaff looked for a way out.

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circumstances and Williams & Glyn's will be very glad to suggest the best method of providing finance to suit any particular case.

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Newsprint to be 7% dearer next month

BY WILLIAM HALL

THE PRICE of newsprint is to increased by about 7 per cent. This is the second rise in less tban a year, but In inflation terms newspapers will pay no more than in 1977.

The Scandinavian suppliers told their customers that prices were going up from March 1. The major Canadian producers increese their prices on April 1. The moves follow recent increases in North American

Abitibi-Price. the world's lergest newsprint producer, has warned customers that its price of standard newsprint is to rise by £15 to £270 a ton. Con-solidated-Bathurst will raise prices by a similar amount. In common with other sup-

pliers both companies operate a rebate scheme, so that news-paper publishers are given a discount if the value of the pound strengthens.

companies. With Abitibi and Gonsolidated-Bathurst it means that the effective UK price will he about £231 a ton at current

Other newsprint producers are to cut nominal prices and alter currency repate schemes. The net result is that effective price atill goes up by ahout 7 per cent,

Swedish producers will cut their UK prices by about £15 a ton to £270, but increase the exchange rate when the currency clause becomes opera-tive. This has been raised to \$1.95. Finnish producers followed a similar course.

International Paper, the U.S. paper gient, is reducing UK newsprint prices from £280 to £245 a ton replacing its currency rebate with a fixed exchange rate of \$2.15.

The rehate scheme was intro-duced when sterling was depreciating and newsprint suppliers wanted protection against losses.

The pound hegan to

The pound hegan to strengthen and newspaper pub-lishers had heavy discounts. This scheme caused consider able hardsbip to UK newsprint producers, whose prices were majority. The Roman Catholic when costs were reduced minority would get representa-tion through advisory commit-

BSC seeks support for retirement plan

THE British Steel Corporation overshadowed by the corpora-will today try for an early end tion's intention to cut 52,000 to the strike by caovassing jobs from the industry.
support and funds for a scheme Mr. Adam Butter, Industry offer steelworkers early

retirement at 50.
AIr. Robert Scholey, BSC chief executive, and Dr. David Grieves, personnel managing director, will meet Viscouot Etlenne Davigoon, EEG industry commissioner, and Mr. Henk Vredeling, social affairs commissioner, in Brussels to ask the commission to put up balf the money for the scheme.

The prospect of index-linked pensions and tax-free lump sum gratuities is expected to add an important new dimension to discussions which, though currently stalled on a 14.4 per cent poration into losses of around point agenda is heing dispay offer, have always been £0.5bn a year.

Minister, will visit Brussels

tomorrow for talks on the British steel industry crisis. He will be in a position to follow through at the political level any tentative arrangements proposed between Mr. Scholey, Dr. Grieves and the two commis-

The early retirement plan would be expensive. But its hackers claim it would he no more expensive than allowing British Steel to continue in its present over-sized and overmanned condition which, if not

Ireland assembly hopes dwindle

BY STEWART DALBY

THE constitutional conference on Northern Ireland resumes today hut, with power-sbaring finally ruled out, hopes of any devolved assembly being restored this year have all hut evaporated.

Over the week-end Mr. Ian Paisley, the main Unionist repre-sentative at the talks, made an unexpectedly vicious attack on Mr. Gharles Haughey, the Irish Prime Minister.

In a speech unconnected with the conference, Mr. Paisley said:

"Get the message tonight Charles Haughey. There will never he an all-Ireland so long as there is a Unionist and Protestant mejority in Northern

He added: "We would sooner die than permit you and your IRA to obtain your shared goal of an all-Ireland republic." Last week Mr. Paisley put his proposals for any future Northern Ireland Government.
The DUP said any executive must be made up entirely by the majority, in practice the largely Protestant Unionist

Unacceptable

The principle of majority rule at executive level is unacceptable to Mr. John Hume, Social Democretic Labour Party leader and representative of the

minority.

However, despite this wide difference the conference will go on. The SDLP wants to attend because it feels the conference gives it the forum for speaking to the Government. Mr. Humphrey Atkins, the Secretary of State, has always insisted that this limited con-stitutional conference was just

the first step in a long process.

Nevertheless, the Government's original hope now seems unrealistic. This was that the conference would end at Easter, with some kind of blueprint the Government could hulld on and submit to Parliament in the summer, with

paid, further tax payments and calls on partly-paid gilt-edged stocks are also due in the next a referendum in the autumn. The conference will almost certainly continue until July-The shortage of liquidity has already resulted in a rise of a point in money market interest this week item seven of a 13rates in the last ten days.
This has made it much more

Budget concessions likely for profit sharing schemes

These provide for employees to owns shares and gain tax

concessions if they are beld for

the Midland Bank bave either

introduced new schemes or

modified older arrangementa.

Now the Government is being

asked to cut from ten years to

five the period that shares have to be held to enjoy full tax

exemption, and to reduce the

compulsory ownership period before conceasions come into

force from five years to one. The CBI has also said that

maximum annual pay-out allow-

able for tax concessions should be increased from £500 to £1,000.

The main small business measures will concern capital

taxation, although there have

couraging the single entrepre-neur to be extended to groups

The Bank of England said on

Friday that the recall of £500m

will be put off from this Friday until May 14.

Friday's announcement, stock-brokers James Capel suggested

that the Bank will have to take

even further action if a rise

in hase rates is to he avolded.

This may require both a roll-

ing over of the £500m gilt saie

and repurchase arrangements

with the clearing hanks, due to expire next week, and addi-

The hrokers suggest that

money market shortages will persist for most of the rest of

the current banking month to

March 19. However, money

market conditions should ease

1984 games scheduled to he held

people. Delegates to a meeting of the council condemned the

Soviet invasion of Afghanistan but voted 59 to 36 against a boycott.

tional facilities.

In a comment written before

BY JOHN ELLIOTT, INDUSTRIAL EDITOR

TAX CONGESSIONS for profit Inland Revenue has approved sharing are likely to be included only 68 company schemes and is still vetting 119. Government's attempt to provide incentives for industry in what will otherwise be a fairly somhre package.

These concessions are likely to be linked with beip for small businesses, to show that the Government wants both to increase the involvement of employees in their places of work and to help entrepreneurs.

Ministers have however yet to

ecide on the details and the Budget speech's provision for for entrepreneurs may depend on last-minute political considerations.

. The Government bas for example been coming under especially from small business lobbyists with Gonservative Party links, to include a special guarantee scheme on bank loans for small businesses. ank loans for small businesses. also heen requests for special There bave also been many tax belp for new companies. The calls for the profit-sharing tax idea of a special category of concessions introduced by the small firms' investment comlast Government as part of the Lib Lah pact to be extended.

Committee on financial institutional control of the committee on financial institutions.

The Confederation of British tions, has been pushed by the Industry recently told the Chancellor of the Exchequer that the existing provisions are into the existing provisions are operatives have also asked for any concessions aimed at entire the existing provisions are operatives have also asked for any concessions aimed at entire the existing provisions are constituted in manicial histitudes. administratively too compli-

Since the concessions were of workers who set up their own announced two years ago, the husinesses.

THE GOVERNMENT'S desire

to hold interest rates at the

week by continued upward pres-

Sure caused by severe shortages

of liquidity in the money mar-

ket. This may force the Bank of England to consider providing

further assistance to the market.

The pressures may intensify

today when £700m of Petroleum Revenue Tax is expected to he

difficult for the clearing banks to hold their hase lending rates

at current levels in spite of their

The medallists include Lynn

games. The Government wants

the committee to delay the decision until after diplomatic

moves to end the Afghanistan

Interest-rate test

BY PETER RIODELL, ECONOMICS CORRESPONDENT

current level at least until the of special deposits temporarily Budget is likely to be tested this released to the money market

reluctance to chaoge rates when record profit increases are heing announced.

April. Minimum Lending Rate is unlikely to start to fall until mid-May at the conductions should ease in April.

Medallists warning on

'collapse of Olympics'

A BOYCOTT of the Moscow The letter warns that if Olympics would lead to a collapse of the Olympic movement sport becomes accepted, all and a weakening of world sport, international events would be

says an open letter to the subject to "government whim."
Government and sports bodies
Signed by 10 British Olympic the sbaky financial basis " of the

Their appeal comes on the eva boycott the Moscow games of a decision by Britain's came yesterday from the British Olympic committee on whether Youth Council, which repreto send a team to tha Moscow sents more than 6m young

for Government

New cars sell better than expected

By Kenneth Gooding, Motor Industry Correspondent

THE continuing demand for iong enough. A wide range of companies, incuding Marks and Spencer, British Sugar, ICI, and new cars has surprised the UK industry and some forecasters helieve original estimates of sales this year were too low.

> Car registrations in February will top those for the same month last year by at least 10,000 and reach around 143,500. This follows the high January figure of 159,100, nearly 2 per cent ahead of the January 1979 total. The industry's forecasters

had expected a downturn in demand by now and privately see a need to revise the Society of Motor Manufac-turers and Traders' estimate that car sales this year will drop to 1.5m from the 1.71m

The society produced its forecast early in January and will stick with it at least until the Budget on March 26 at which stage the first-quarter sales total will he almost complete.

But there is a growing feeling within the society that the recession in the UK car business might take longer than expected to make an impact, so that 1980 might be better than forecast and 1931 worse. The recovery might well now not take place until 1982.

The importers' share of the February new car market dropped slightly from the January level, from 59.5 to 57.5 per cent.

To some extent this was hecanse the Japanese were short of stock. Datsun, for example, had its worst February for six years and took only 4 per cent of the market against its usual monthly 6 per cent. Ford remained market

leader by a long way last month even though it could month even though it could not keep up the pace in January, when it gained a 37.6 per cent share. Last month it was 32.25 per cent.

From today 250 men will be laid off for three weeks in the transmission plant at the Ford Followed. plant at the Ford Halewood factory on Merseyside. They will be paid up to 80 per cent of their wages.

BL to launch Triumph TR7 hardtop

BL WILL launch its Triumph TR 7 open top sports car, priced just under £6,000, at the end of this month writes Ken Gooding.
It is the first mass-produced sports convertible to he introduced in the UK since the Triumpb TR 6 was launched 12

years ago.

The TR 7 with hard top was first sold in the U.S. in 1975 and introduced to Britain the following year. BL says the car has always been a money spin-ner, with £150m earned in

Davies, Adrian Metcaife, Alan Another appeel to the Govern-Pascoe, and David Wilkie. ment and British athletes not to foreign currency alone.
The soft-top derivative, already available in the U.S., is "expected to ettract big sales in Europe and consolidete BL's status as the world's largest sports car manufacturers," the company stated yesterday. BL is improving the specifica-tion of the hard-top TR 7, which will sell et £6,176.

Rates to rise by average of 26%

DOMESTIC RATE hills in England and Wales now seem certain to rise by an average of ahout 26 per cent in April

means that dozens of local authorities will be substantially. above the national uniform rate of 119p set last year by Mr. Michael Heseltine, Environment Secretary.

Based on these figures the average domestic hill would rise by ahout £40 a year, to £190. The Association of District Councils has statistics from more than a third of the local authorities, showing an average rise of 25.96 per cent. The Centre for Environmental Centre for Studies predicted this figure when it analysed rate trends

recently. It means more than 100 authorities will levy a rate higher than 119p. This presents the Government with the problem of bow to effect its threat to penalise high-spending authorities.

Newcastle upon Tyne leads.
the rates league with a proposed rate of 176.5p in the ffor 1980-81. A growing number
of other authorities are moving into the 145p-155p range.
The notional uniform rate of

119p was used in calculating how much grant support the local authorities would get from

local authorities to which how to calculate the penalty ahout 26 per cent in April. now to calculate the penalty,
This is far higher than the which will involve withholding a
Government had hoped and it portion for future grant, is still not clear.

Mr. Heseltine has already told local authorities that he envisages action against only 10 to 20, which means he will have to find a threshold far above 119p for a limit.

As he is politically committed to acting against high spenders, there is little possibility that he will back down although his measures are extremely un-popular with both Tory and Labour local authorities across the country. Many Tory areas will hreak the 119p line.

His most likely course of action now will he to wait until , all the rate figures are known, choose the top 12-15 and set the threshold after them. This would mean a limit of about 150p in the pound.

He is anxious that the exercise ahould not be seen as an attack only on Lahour authorities, although they will probably take the top ten places. So the threshold and number of authorities penalised can be expected to be a set at a level which puts at least one, and probably two Tory authorities

Food prices up 11.5% and 15% more spent

BY RICHARO MOONEY

CONSUMERS spent 15 per cent total for red meats was 15.2 more on food in the third against 14.79 oz, and for quarter of last year than in the same quarter of 1978, say Liquid milk consumption Ministry of Agriculture figures today.

Liquid milk consumption slipped from 4.40 pints per person a week to 4.19, probably industred by the large price.

Excluding sweets, soft drinks, alcohol and pet food, household food expenditure averaged £6.67 per person a week, up 86p from the 1978 figure. It was 35p up on the April-June quarter. . In the same period overall level of food prices rose 11.5 per

Consumption of meat, poultry and fish was generally higher; that of milk and dairy products down. A fall in consumption of white hread was more than

17.14 from 15.75 ozs, while Fresh consumption fell to 32.88 poultry rose from 6.34 to from 34.27 oz, while frozen rose form 3.36 to 3.50 oz.

much less strong. The adjusted 12.18 from 12.89 oz.

influenced by the June price rise and the strike affecting breakfast cereal sales, the Ministry says. Cereal consump-tion fell from 3.59 to 3.31 oz. Cheese and butter consump-

tion fell marginally, but more margarine was eaten, particularly the soft variety. The average Briton ate 1.06 oz less white bread, 24.14 oz, but made that np with a 1.25 oz in-crease to 8.71 oz of brown, wholewheat; wholemeal and other bread.

compensated by rises for hrown, Fresh vegetable consumption wholemeal and others. Was down from the high level Household consumption of the in the third quarter of 1978. main red meats, heef, veal, This was only partly made up hy mutton, lamb, and pork rose to a rise for frozen vegetables.

When ailowance is made for Tea and instant coffee made movements in and ont of significant gains at 2.19 oz (2.05) and 0.55 oz (0.47) respectively. Sugar consumption was down to

Review ordered of law on misleading price tags

THE GOVERNMENT regula recommended prices or other tions hanning display by unsubstantiated figures. retailers of misleading price comparisons are under review. This follows wide criticism from the retail trade that the regulations, which came into force last year, are unenforce-able and are being flouted by

Under the Price Marking (Bargain Offers) Order 1979, retallers of beds, domestic elec-trical appliances, consumer elec-tronic goods, carpets and furniture must not make com-parisons with manufacturers others deliberately ignore them.

The aim was to stop retailers claiming to have made hig price reductions off a manufacturer's recommended price when that price was charged by few, if

other misleading comparisons. Such as that goods are "worth" more than the price charged, were also banned.

Since the regulations came in for beds last July and the other goods in December, it has become clear that many traders

▼ The decision to buy was entirely on the basis of saving money. 9-Department store

"Although not the cheapest, we considered that it provided the best solution." - Piant hire company

"We have management information when we need it - immediately."-Distributor

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Find out more about today's essential management aid. This coupon will bring you full details of MAI Basic Four computers.

 \mathbf{MAT} MAI United Kingdom Limited, Black Arrow House, Chandos Road, London NW10 6NF.

These are spontaneous quotes by Basic Four users. Overwhelmingly, they are first-time users, people responsible for running small businesses. Their views are confirmed by independent Datapro research surveys in 1978 and 1979. These showed that the highest level of satisfaction amongst small business computer users was from Basic Four customers.
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Company	·
Position	
Address	<u> </u>
Tel No	FT2

Thistle Field output approaches peak

BY MARTIN DICKSON, ENERGY CORRESPONDENT

after more than a year spent in overcoming pressure difficulties

that reduced output. Thistle Field, operated by the British National Oil Corporation. is one of the larger producers in the UK section of the North from water deposits at its Sea. Its rising output will be periphery proved less than exsignificant in Britain's drive to-

Thisile opened production in Fehruary 1978 and was expected to huild up rapidly to its fore-

cast peak rate of 180,000 harrels

PRODUCTION from the Thistle wards oil self-sufficiency, ex- about 110,000 barrels a day to Field is about to reach a peak pected to be reached this year. 60,000 h/d by March last year. BNOG thus had to bring for ward its plans to inject water into the field to maintain

> Water injection began last April and production since then has risen gradually to stand at 114,000 h/d. A new production well, the field's 13th, is about to come into operation



Ferranti Computer Systems is supplying an Argus minicomputer-based process control system valued at £1/2 million for an ethylene plant at Sines, Portugal and a £1 million system to monitor and control a natural gas production and distribution complex at Hanover.

Nearer home two dual Argus computer systems have been delivered to the Kilroot power station, Northern Ireland and a computerised currency exchange system has been ordered for Barclays Bank at Heathrow.

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Machines

Refrigerators

Spin Dryers

Fridge Freezers

Automatic Washing

Saucepans/Frying Pans

Heated Rollers

1979

72%

60%

71%

1979

51%

99%

78%

60%

61%

22%

16%

31%

1979

66%

70%

36%

40%

61%

21%

58°

1979

99%

68%

44

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	Whole industries that o	once flourished in Britain	Ļ
	no longer exist.		

Each time we choose a foreign made

product rather than one made at home, we drive

And again when we pay for the unemploy-

we pay twice.

Once over the counter.

ment we're helping to create.

And the trend for many other industries is looking increasingly unhealthy.

Things wouldn't be quite so bad if we were able to expert our way out of trouble. But our

exports are only growing at one tenth of the rate Right now it must be sensible for us to stop

trying to pin the blame on each other. And start trying to put things right instead.

whenever possible.

British goods out of blind patriotism.

made product in the mistaken belief that it cannot be as good as a foreign one. Foreigners find our defeatist attitude

Which is almost certainly why the problem | the British buying British. is unique to Britain.

One industry at risk right now is the motor industry. An industry whose importance to Britain cannot be overestimated.

It brings employment to millions of workers. It trains most of our engineers. Indeed it is our biggest single manufacturing industry.

BL is the only British owned volume car maker. The other large manufacturers can, and do, switch car production away from Britain. Not so BL.

Which is why it's so important for BL to succeed. And remain British owned. Of course BL would have a tremendous

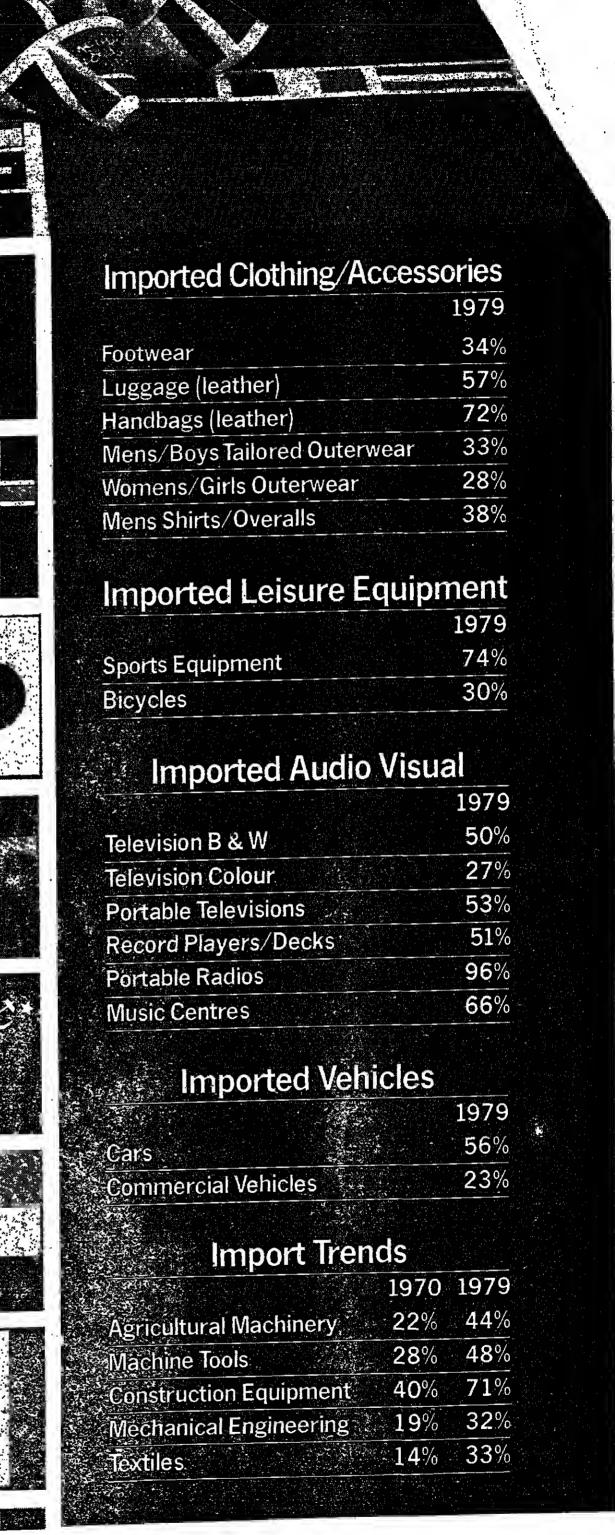
But the problem doesn't just belong to the motor industry.

It affects us all. And it's striking deeper and deeper every day.

Not too long ago, our standard of living was the highest in the world. Now we're not even in the top twenty.

The climb back will not be easy. But we can all begin today by taking a fresh look at British manufactured goods.

Next time you're looking to buy enything, but especially a motor car, see how the British product stacks up first. If then you find it doesn't suit you, we'll be surprised. But we'll have no amount to gain from a shift in attitude towards complaints.



BUY NOW, PAY LATER.

Buy something made outside Britain and

We could all make a start by buying British

This doesn't mean that we should choose

But that we should never ignore a British

amusing. And extremely profitable. They instinctively support their own industries by choosing home-produced goods.

ISSUED MAINLY IN THE INTERESTS OF BL BUT ALSO ON BEHALF OF BRITISH MANUFACTURING INDUSTRY.

A Scargill grand design is seen . . .

Behind the Barnsley 'wipe-out'

BY PHILIP RAWSTORNE

first to admit, if not appreciate, lives. weekend as the Yorkshire a total strength of 542, to inininers and lheir Left-wing crease the number of miners' avert any angry reaction by
allies seized control of Barnsley delegates to the general manother trade unions. irony of his position last Lahnur Party.

"The miners' union has a ennstitutional right to organise its memhership and amass its other branches, they commanded strength," he said. "I would not he the MP for Barnsley if the union had not done it in 1953."

It was the National Union of Mineworkers' political muscle that gave him, a former miner, the Parliamentary seat, and that now threatens to push him from

The threat has not yet been voiced. Mr. Arthur Scargill, the Yorkshire miners' president. has refused to talk about any aspect of the party coup. Publicly, he has neither accepted responsibility for its election. organisation nor pointed to its

ultimate objective. however. During the past year, make way for another miners' a new branch of the local party nominee. was established at his union

MR. ROY MASON, Labour's from the Worsbrough area of of the 16 executive seats Mr. Mason has kept cool and

agement committee from 21 to

With Left-wing allies from a majority at the annual meeting of nearly two to one over Mr. Maaon's supporters, What was described as "a

wipe-out" followed. Mr. Ron Fisher, chairman, who bad incurred hostility hy describing some of the miners as "political prostitutes" was ousted by 108 votes to 58.

He was replaced by Mr. Norman West, a miner, a close friend of Mr. Scargill and widely tipped as the man who will challenge Mr. Mason for the party's candidature at the next

Mr. Theo Hinchcliffe, doyen of the party and its treasurer Events speak clearly enough, for 35 years, was removed to

encouraged to join their ward branches; of 190 application for party membership, 59 came from NUM members and 53 self and other miners took ten

quiet, providing no excuse for former Ulster Secretary, was the total town, where Mr. Scargili allocated to trade unionists. Quiet, providing no excuse for former Ulster Secretary, was the total town, where Mr. Scargili allocated to trade unionists. Quiet, providing no excuse for frest to admit if not appreciate, lives.

They had intended to take all his opponents to mount an

The result was, in a party with 16, but aix nominations were immediate challenge. his agent, has made clear that the MP and the party's Mr. West said afterwards that moderates intend to fight back

be thought the new composition represented a fair balance. It also happened to tip the scales in favour of Mr. Scargill and his supporters, giving them a majority on the 40-strong

executive. Mr. Scargill, without breaking any party rules, bas accured a position from which he can dictate the choice of Barnsley's future Labour candidate for Westminster in the mandatory re-selection process.

From his past criticisms of Labour MPs, and NUM-sponsored MPs in particular, who fail to toe the times laid down by Leftwing resolutions of the party conference or hy his union, Mr. Scarglli is hardly likely to see Mr. Mason as that candidate.

Mr. Mason has a reputation as a tough, independent man So was Judith Watts, secre- and is solldly established among headquarters; miners have been tary, although she retained an the leaders of the party's Right-

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EXHIBITIONS

Olympia

Shipyard pay deal signed

MINIMUM EARNINGS for the 76,000 men in the UK's nationalised shipyards are to be raised from £80 to £96 a week for skilled workers and from £62 tn £74.40 for the unskilled.

A revised agreement was signed in Newcastle yesterday between British Shipbuilders and the Confederation of Shipbuilding and Engineering Unions.

British Shipbuilders esti mates that the rises, which will be in effect in full on October 1, will add £1.5m a

week to its wages.

"There is no going back now," said Mr. John Chalmers, chairman of the union's ship-building negotiating com-mittee. "The deal has been

mittee.
signed."
Referring to objections by
Municipal General and Municipal Workers' Union members on some parts of the deal, which last week resulted in 1,100 Sunderland Shipbuilders' men voting to reject the February 13 agreement, Mr. Chalmers

said: "We bave closed ranks.
That is our position."
Mr. Ken Griffin, British
Shipbuilders' deputy chairman, said: "All unions have accepted the result of the negotiations."

Meccano court move likely

ang ang kangga ka

BY ALAN PIKE, LABOUR CORRESPONDENT

factory in Liverpool.

until last Friday while efforts moves were made, there would on Merseyside." were made to find a buyer. But be no violence.

A warning that Airfix would the deadline expired with 50
However, the company. "take the necessary legal action to 100 of the original 940 claimed that Mr. Egan and to regain possession of the workers still in occupation.

A warning that Airfix would the company. "take the necessary legal action to regain possession of the another union representative, factory" was given after Mr. workers still in occupation. Airfix says that, by Friday.

Mr. John Lynch, had incited Derek Dodds; chief executive of more than 900 bad accepted the workforce to continue the Meccano, and the company's sit in, although they were legal representative visited the

AIRFIX INDUSTRIES' manage—Municipal Workers' Union, said—Mr. Ralph Erhmann, chairman ment is likely to go to the High—all vulnerable places were bar—of—Airfix, said: "We are Court today, to try to end the ricaded and the workers would extremely disturbed that two occupation of the Meccano resist any move to evict them. Mr. David Linge, Amalgam- the agreement reached with Under an agreement reached ated Union of Engineering us. Their action will achieve with union representatives on Workers convenor, said the nothing and will only damage January 31, the company occupation had been peaceful their unions and make it more allowed the sit in to continue throughout and, whatever difficult to maintain employment

A warning that Airfix would Mr. Mike Egan, district personally party to the January plant, and were refused admig-officer of the General and 31 agreement sion.

BL 'needs three years peace'

BY OUR LABOUR CORRESPONDENT

Engineering Workers.

The three years would prove to the nation and the world that the company could be efficient and competitive, and that it could produce reliable cars with good back-up service.

BL NEEDS three years without had the skill, experience, aptiproduction dislocations, says Sir tude, versatility and desire we regain lost markets, rein-John Boyd, general secretary of to make a success of the troduce full employment and the Amalgamated Union of company. give job security. We must "This does not mean that

every decision of management must be accepted without challenge as coming from an omniscient or omnipotent source, but it does mean that differences should be talked good back-up service.

Sir John, writing in the promises effected without proAUEW journal, said BL workers duction being halted.

However, Sir John warned that, whatever the eventual outcome of BL's pay negotiations. where the workforce has rejected the company's proposals, craft differentials must be improved. The past 12 months at BL had been disappointing, be said.

BUSINESSMAN'S DIARY

UK TRADE FAIRS AND EXHIBITIONS

Date	Tiue
Current	Camping, Outdoor Holiday Exhibition and Motor Caravan Show (01-262 2886) (until Mar. 9)
Current	Automin Exhibition (01-235 7000) (until Mar. 6)
Current	International Contract Furnishing and Interior
	Design Exhibition (01-540 1101) (until Mar. 6)
Mar. 3-6	National Mail Order Merchandise Show (0272)
	292156)
Mar. 4-6	Automatic Lahoratory Techniques Exhibition (01-
	855 7777)
Mar. 4-15	Chelsea Antiques Fair (0727 56069)
Mar. 4-29	Ideal Home Exhibition (01-353 4000)
Mar. 5—6	
	Exhibition (0277 74290)
Mar. 11—13	Microforum Europe (01-405 6233)
Mar. 11-13	Ready-to-Wear Fashion Fair (01-637 2400)
Mar. 17—21	Brewex '80-International Brewing, Bottling and
,	Allied Tradea Exhibitioo (021-705 6707)
Mar. 17-21	International Packaging Exhibition-PAKEX
	(021-705 6707)
Mar. 25-28	London Fashion Exhibition (01-385 1200)
Mar. 26-28	Viewdata '80 Exhibition (0895 39262)
Mar. 29-Apr. 8	Birmingham Motor Show (0602 51202)
Mar. 30-Apr. 1	British International Footwear Fair (01-437 6734)
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OVERSEAS TRADE FAIRS AND

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Mar. 1—10	International Art of Homemaking Exhibition (0) 439 3964)
Mar. 2-5	European Fashioo Fair (01-215 7877)
Mar. 2—6	International Spriog Trade Falr (01-734 0543)
Mar. 2—9	International Agricultural Exhibition (01-439 3964
Mar. 4—12	IMF 80 International Fair for Mechanical Handlin
24041 1 25 1111111	(0727 63213)
Mar. 9-3Iar. 16	International Spring Fair (01-493 3111)
Mar. 10-13	International Footwear Fair (01-589 4891)
Mar. 15-21	World Photographic Exhibition-WORLD PHOTO
	(021-705 6707)
Mar. 16-20	Middle East Business Equipment Show (01-48)
	1951)
Mar. 22-26	Confectionery, Chocolate and Biscuits (INTERSUC
	(01-439 3964)
Mar. 23-31	Spring Fair (01-935 8200)
Mar. 27-Mar. 31	Machine Tool Exhibition-METAV (01-409 0956)
Mar. 27-Apr. 5	British Aviation Equipment Exbhn. (01-215 7877)
Арг. 7—10	World Fabric Fair (0532 469611)
Apr. 13—15	MODEXPO '80: International Ladles Fashlon Fair
Apr. 16-24	Hanover Fair (01-651 2191)
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BUSINESS AND MANAGEMENT CONFERENCES

Mar. 3—4 Mar. 4	FT Conference: World Motor Industry (01-236 4382) The Institute of Directors: Are Chips Fattening? (01-940 4925)
Жаг. 5	British Printing Industries Federation: Books UK (01:242 6904)
Mar. 5-7	SOCOPO: Facing Change in the 1980s—The Role of the Personnel Function (Worcester 353366)
Mar. 56	BIM: Cetting to Cripa with Mini and Micro Computers (01-405 3456)
Мат. 10—11	Government Research Corp.: U.S. Banking in 1985 (0444 51507)
Мат. 10—13	Compower Training School: JCL/Utilities for Operations Staff (Cannock 2511)
Mar. 12	Henley School for Forecasting: Forecasts for Consumer Marketing Plans Short, Medium and Long Term (01-353 9961)
Mar. 12	International Council of Shopping Centres: The Changing Face of Shopping (01-589 3422)
Mar. 13	PA International—The Successful Acquisition of Companies in the U.S. (01-581 2067)
Mar. 13—14	CCC: The Use of Offshore Financial Centres—The Netherlands and the Netherland Antilles (01-202 6362)
Mar. 13—14	Eurotech: Office Planning and Design (Aldershot 313066)
Mar. 17—21	Brunel Institute: The Effective Organisation (0895 56461)
Mar. 19 Mar. 19—20	LCCI: Industri. Investment in Tunisia (01-248 4444)
	CCC: Foreign Currency Assets and Liabilities (01- 222 6362)
Mar. 19—21	Gower Conferences: International Insurance Con- ference (01-402 7121)
Mar. 20	BACIE: The Impact of Microelectronics on Industry and Commerce (01-636 5351)
Mar. 24—25	FT Conference: Business Premises and Profitability (01-236 4382)
Mar. 26	Henley School for Forecasting: Costs and Price Forecasts to 1985 (01-353 9981)

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Financial Times Conferences

Business Premises and Profitability London-March 24 and 25, 1980

The importance of this conference for management in all sectors of the manufacturing industry, commercial enterprise and administrative authorities cannot be overstressed. Ideas developed from successful experience, overseas situations and industrial studies, which will help overcome problems often found in administration, finance and communication for all parties involved, will form the basis of presentations.

Those key practical factors for future planning in setting up new premises, converting old, or expanding existing facilities will be examined and opportunity for discussion given to delegates. The conference is orientated towards those in the construction industry, the professionals in construction work and the owners of business alike.

International Sweetener and Alcohol Conference—The Future of Sugar London-April 1-3, 1980

The vicissitudes of the world sugar market and trading in the commodity, together with the efforts and implications of international and national organisations to overcome the problems facing them in bringing order for the future, will be examined in depth by leading political and industrial figures in the industry and community organisations, including speakers from America, Australia, Brazil, Cuba, England and France.

All enquiries should be addressed to: Financial Times Limited

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WEEK'S FINANCIAL DIARY

However, Mr. Trevor Lindley.

There will be a drive to bring

more of Mr. Mason's supporters

among the town's Labour voters

into party membership. If other

trade unions alone asserted

their full role in the party they

could out-vote the miners, Mr.

Changes expected in Barns

ley's parliamentary boundaries

might also cut some of the

ground they have gained from

under the miners' feet.

Many believe that his Barn-

sley coup has heen a testing model for a wider movement to strengthen the miners—and his own—political hase.

The NUM's political influence

has declined in recent years in several Yorkshire area con-

stituencles that cover predomin-

antly mining areas.

Lahour leaders nationally are

apprebensive about the climate.

The wind of change that has blown through Barnsley may.

vigorously.

Lindley suggests.

The following is a record of financial engagements during the week. The Board meetings are mainly for the purpose of considering dividends and official indications are not always available whether dividends con-cerned are interims or finals. The sub-division shown helow la hased mainly on last year's time-

COMPANY MEETINGS...

ECOMPANY MEETINGS...

Brentnell Geard, Fonoders Court. Lothbury.

E.C. 1.30

Claverhouse lov. Trust. 5. Crosby Square.

E.C. 2.15

Dewhurst and Pathar, Melbourna Works.

Inverness Road, Hounslow, Middlesex,

4.00 4.00
Plastics Constructions, Birmingham
Chamber of Industry and Commerce, 75,
Harborna Road, Birmingham, 12.00
Stakis (Rec.), Normandy Mozel, Inchinnen
Road, Restrew, 3.00
BEARO MEETINGS— Finals: Slanden and Noakes Ewer (George)

fisons investment Trust of Guernaey Isle of Man Enterprises Roynl Insurance interimes

Beradin Rubber

Yictor Products (Wallsend)

DIVIDEND & INTEREST PAYMENTS—

Aserco Inc. SO cents

Australia 7pc Rep. 79-31 Si-pc

Brmingham Pallet 2.50

Conk (William Shemeld) 0.5n

Dimon Corpn. 5 cents

Hardy and Hinson 6.80

Howard Shuttering 0.50

IU International Corpn. 2334 cents

ingersoli-Rand 83 cents

K Shoes 1.7650

Midland Trust 2.450

Midland Trust 2.450

Midland Trust 0.694

R.F.D. 0.69

R.F.D. 0.69

Primerston Invest, Trust 0.694p
R.D., 89
R.C., 8 Tanganyika Supe 78-82 27pc
Tosco Stored 19
TOMORROW
CIMPLANY MEETINGS
Levanders Discount, 1, 5t. Swithins Land.

60 cents mt 11.501p

Works, Kattle

Congleton Chephire 12.00 Morhs Kattl bridge Rd., Shaffald, 3.30 Rno Estrice, Wrotham Place, Wrothai Kent, 11.30 BOARD MEETINGS—Plaate: ringus: Anglo Amarican Gold Invastmant Auft and Wiborg Eridgewatar Estatus Crouch (Derek)

4

This week in Parliament

TODAY

COMMONS—Companies completion of remaining atages, Motion on Road Traffic Accidents (Payments for Treatment) (England and Wales) Order 1980.

LORDS-Highwaya Bill, Statute Law Revision (Northern Ireland) Bill (consolidation measures) second reading. Beea Bill, third reading. British Aerospace Bill, second reading. Competition Bill, report stage.

SELECT COMMITTEES—Home Affairs. Subject: Deaths in police custody. Witnesses: Assn. of Police Officers, Met. Police, Police Superinten-dents' Assn. (Room 8, 4.30 p.m.) Public Accounts. Subject: Scottish Development Agency Accounts 1977-1978, 1978-79. Witnesses: 1978, 1978-79. Witnesses: Scottish Development Agency, Scottish Economic Planning Dept, (Room 18, 5.15 p.m.) TOMORROW

COMMONS-Motions on Members' secretarial and research allowances. Proceedings on the Highlands and Islands

Air Services (Scotland) Bill. Motion on the Prevention of Terrorism (Temporary Provisions) Act 1978 (Continuance) Order, LORDS—Representation of the

People (Variation of Limits of Candidates' Election Expenses) Order 1980. Criminal Justice (Scotland) Bill, report stage. WEDNESDAY COMMONS-Debate on Opposi-

tion motion on the damaging effects of Government cuts in employment and training opportunities when unemployment is rising steeply. Proceedings on the Slaughter of Animals (Scotland) Bill and Reserve Forces Bill (both consolidation measures). LORDS-Debate on the lack of adequate home and civil defence. Debate on facilities for legal aid in juvenile court SELECT COMMITTEES-Edn-

catinn, Science and Arts. Subject: The funding and organisation of courses in higher education. Witnesses: The Association of University Teachers. National Associa-

tion of Teachers in Further and Higher Education. (Room 6, 10.30 am). Scottish. Affairs. Subject: Co-operation and overlap among agencies etc. Responsible for attractinward investment to Scotland. Witnesses: Scottish Economic Planning Dept. (Room 5, 10.30 am). Foreign Affairs. Subject: The conse-quences of Soviet expansion for British foreign policy: The Olympic Games. Witnesses: British Olympic Association (Room 15, 10.45 am). Industry and Trade. Subject: Import and Export trade. Witnesses: Officials from the Depart-ments of Trade and Industry. (Room 16, 10.45 am). Trans port. Subject: European Com-Transport Infrastructure. Wit-nesses: British Rail. (Room 8, 4.15 pm). Employment. Subject: The Manpower Ser-vices Commission's Corporate Plan 1980-84. Witnesses: Chairman and other officials of the Commission. (Room 6, 4.30 pm). Public Accounts. Subject: Selective Assistance to the Shipbuilding Industry.

National Research Development Corporation Accounts.
Witnesses: Department of Industry, National Research Development Corporation. (Room 18, 4.45 pm). THURSDAY
COMMONS—New Hehrides Bill,
aecond reading. Proceedings on the Consular Fees Bill and

on the Police Negotiating Board Bill.

LORDS—Debate on the 27th report of EEC on policies for rural areas in the European Community and the 15th report on policy for agricul tural structures. Debate on the report on European Institutions and on the Spierenburg reports, Debate on a World Commodities Centre in London.

SELECT COMMITTEE Agri-culture. Subject: Economic, social and bealth implications for UK of the CAP on milk and dairy products. Witnesses: Consumers in the Euro-pean Community Gronp (UK). (Room 16, 11 am).

FRIDAY COMMONS-Private Members'

"PLANNING IS JUST A WASTE OF LEDSTRATEGIC PLANNING"

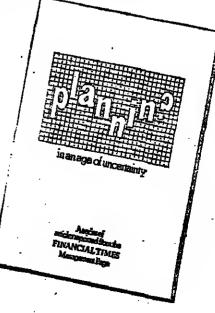
This comment by the head of a Dutch Company, illustrates the controversy over the problems companies experience when attempting to make long-range plans in today's, and tomorrow's, complex and unpredictable world.

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ace,

On the one hand, a man born, bred and hardened in the West Riding, running his own small chemical company.

On the other, a man born, bred and hardened in West Byfleet, running a large investment company somewhere in the City.

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The man who stood up for his principles

Nicholas Leslie meets Angus Murray, the non-executive director in the Pru v Newman case

TO CREDIT husinessmen with anything but fairly modest sound totally convincing when

Angus Murray manages it, however, A bluff Scotsman, he that makes him totally convincits holding in Newman), the ing. He also readily acknow stated value of which was horrowed from a speech hy Sir Winston Churchill, though he adds his own embellishment with the thought that "of courage is the most important, for without it the other two characteristics are useless."

Murray is in a good position to know. For without him there may never have been a Newman Industries affair, which reached its ctlmax in the courts last week when Mr. Justice Vinelott gave his reserved judgment in favour of Prudential Assurance in its

accepted the Pru's allegations qualities generally invites a that a circular issued by Newcynical reaction. So there are man in 1975 bad been tricky probably few people who could and misleading and that action by the two directors — Alan citing "intellect, courage and integrity" as being the essenamounted to a conapiracy. The tial ingredients in the make-up two directors had recommended good non-executive that shareholders accept a proposal for Newman to buy all the assets and liabilities of a company called Thomas Poole has a down-to-earth manner and Gladstone China (except

> There are differing views as to what the role of non-executive directors should be, but there is generally a good measure of support for tha of these qualities theory that they should monitor is the most important, the performance of the chief executive and oppose-publicly if necessary-any proposal general interests of the com-

pany and its sbareholders. Murray subscribes to this view and it was his belief in the latter principle particularly that led him to make a stand at Newman. He has very clearcut views not only on the role action against two directors of of non-executive directors-or

In that case the judge composition of the board as a another. whole. For example, he helieves there should be a reasonable balance of "inside" and "outside" directors and that the chairman (who should he an "outsider") should never combine that role with that of the chief executive of a

> Given his principles, one might fairly ask how he came to be on the Newman board in the first place. Not only was Murray the sole outside director but Bartlett combined the role of chairman with executive functions within the company.
> Murray says that he joined as
> a result of an invitation from someone be had known for several years in the belief that other oulside directors were to be appointed and that the roles of the chairman and chief executive were to be separated. Tbis, he says, never happened.

The period during which he was in dispute with the rest of the Newman Board-some eight months until he was ousted in February. 1978—he describes with some understatement as " most uncomfortable." events certainly highlight the possible lot at some time or

Murray says be was tempted to resign from Newman early in 1975 after receiving what he unsatisfactory felt Were answers to questions he raised on the Newman/TPG deal. He thought, though, that shareholders would have been "ill-

served " by such action and stayed. He asked, unsuccessfully, for a merchant bank to he appointed to give indepen-dent advice on the proposed successfully pressed Bartlett for deal. Deloitte and Co., the an independent inquiry to he accountants, were subsequently given this task, akthough the judge found that they had not been fully instructed.

Opposition

Next, an offer document relating to the Newman/TPG deal was sent out to Newman shareholders, unbeknown to Murray. and Murray tried, but failed, to postpone an extraordinary meet ing called to ratify the deal while he circulated shareholders with his own views. He then resorted to contacting the Press in an effort to make known his

were concerned. However, he expected to bear such costs. subsequently changed his mind because of the narrowness of the majority.

The Pru, meanwhile, had Schroder Wagg and Jeremiah Bank, with which he has long-Harman, QC. This inquiry was eventually completed eventually completed in February, 1976, at which time Mnrray was dismissed from the Newman Board herause, he says, he refused to join the rest of the Board in accepting the inquiry findings when be had only seen extracts rather than the full report.

Murray's experiences throw the role of the non-executive into the sbarpest relief, because he was operation at an extreme that few ever have to face. . But while the case illustrates

opposition before the meeting the obstacles which non-At this point, the Pru entered executives may have to con-the arena by inviting Murray front, it also raises the question of non-executive directors—or difficulties which any outside to a meeting of several of New of what degree of financial "outside" directors as he pre- director must accept as his man's institutional shareholders, pressure they must reasonably Murray again contemplated expect to bear in pursuance of

resigning when shareholders their principles. The legal costs ratified the deal at the extraordinary meeting, on the general estimated at over £750,000, of principle that, if they were which the Pru's portion is over aware of his views hut rejected £300,000. It is incooceivable, them, he would have reached therefore, that an individual the end of the road so far as non-executive, or even a small his duties as an outside director group of two or three, could he

Even without bearing such costs Murray bad to meet a fair level of expense (mainly legal and effectively irrecoverable) in pursuing his case. He acknowledges. though, the assistance in larly through a non-executive directorship of Hambros Indus-trial Management.

Not surprisingly, Murray puts his strong heliefs in ontside directors into practice. He is the non-executive chairman of Redman Heenan International and of Fairey Holdings (currently the subject of a bid from a consortium beaded by Hambros Bank) and has several non-executive directors on both boards.

Broadly, he sees their role as ensuring that a company is being properly managed, a duty that includes the hiring—and if necessary, the firing-of the chief executive. But the free-



intellect, courage and integrity can only he hrought ahout executive directors, their legal when there are sufficient out-

under the control of the chief executive." he says. Another function is consultative, be says, whereby by virtue executives in other companies. they assist a company board in the deliberation and formulation of judgments and strategies. They also, be says, act as "a watchdog."

Murray maintains that in their former capacity outside directors can be effective only if the executives trust them. And in the latter role, "if there is only a lone outside director he is on a hiding to nothing

as a watchdog. The responsibility for the constitution of the hoard rests with a chairman, he feels, not only in terms of halance of outside and inside directors but

through the blending of experience. It is necessary, Murray maintains, to bring in ontside directors strengths offset any weaknesses which may exist among the inside, or executive, directors, The chairman should also watch the age disposition "otherwise you can end up running out of

directors all in one year." Murray sees no real need to change the law regarding direc-tors—for example, despite the differences in roles generally

same. And perhaps hecause of this he has "no sympathy" side directors who are not for the idea—which Sir Brandon Rhys Williams, the Tory MP, is seeking to have added to the non-executives to make a state-ment at annual meetings expressing their confidence in the executive direction and management of the company and in the way the assets are employed. "It is divisive, and it over-emphasises the watch-

dog role," Murray argues. One of the arguments put forward against non-executive directors taking internal disagreements ioto the public arena is that doing so can harm a public company and can hit its share price, which in turn may damage the company's

economic position. Murray clearly has little sympathy for inaction. In the light of his experience he believes that, first, if there is a problem the outside directors must start by trying to resolve it internally. But if that proves unsuc-cessful, they must present their case and information to shareholders." He does not believe that shareholders are uninterested in what goes on provided they get their divi-dends. "When confronted with the facts, shareholders are not expected of executive and non- anathetic," he says.

Cutback in British export promotion to Japan

Milsukoshi. largest department store chain, sent a high-powered huying team to Britain last year to seek out attractive new consumer products, it came back with three suggestions; whitebait. kippers, and steak and kidney

One of the lessons of this affair was that, while some British consumer goods makers have been trying hard to break into the Japanese market, almost everything they can offer is already being supplied from other European countries or the

Capital goods seem to offer a count). far more lucrative opportunity, but British Industry's assumption appears to be that the potential Japanese demand for such imports is so small as to be goods components alone are already running at about £300m a year.

a year. The point is reinforced by a report from the British Embassy in Tokyo that there were more than 300 applicants last year for participation in a British energy exhibition in Peking, many times Japanese Government trade important hecause Japanese the number interested in similar centre (this is estimated to save officials have an irritating habit past events in Tokyo. Yet the about film over the five-year of accusing European countries Japanese market for UK goods period for which the accom- of "not trying hard enough" ever fashionable the long marck

British Government officials in Japan is that UK companies have still not realised how much effort their government is making to smooth the way into the Japanese market: for the last few years Japan bas accounted for six per cent of the British Overseas Trade Board's hudget, well above Japan's sbare of UK exports (two per cent at the last

The limited response by British industry to the rather lavish export programme of the past six years played a part in a recent decision to cut the

Phasing out

One measure involves shifting the British Export Marketing Centres in Tokyo into partially rent-free accommodation in a The other measure involves

Trade in 1973. Officials who nave been cerned with these two decisions year's (see table); indeed the deny that Japan is being downhaa not been a single year since 1973 in which the personal in the BOTB's order of since 1973 in which the BOTB's order of since 1973 in which the personal in the BOTB's order of since 1973 in which the BOTB's order of since 1973 in which the personal in the BOTB's order of since 1973 in which the BOTB's order of since 1975 in which the BOTB's order of since 1975 in which the BOTB's order or priorities from the very special position it held during the 1970s, the proportion of BOTB funds spent on trying to sell more British goods in Japan will still the BEMC is that support for its activities from British industry

be above 2 per cent.
The British Export Marketing Centre and the Exports to Japan Unit were set up in 1973 after the Heath Government had decided that the way to tackle Britain's widening trade gap with Japan was to push exports rather than cut imports.

Holding a dozen or so officially sponsored exhibitions of British products each year, the BEMC has become a symbol of Britain's determination to crack the market (this is Japanese Apart from its symbolic or in 1979 featured consumer

lisbed within the Department of situation is hard to judge. The centage growth of British vious shows. Capital goods exports to Japan exceeded that exhibitors are more likely to be of Japanese exports to Britain, newcomers-if they come at all. Another worrying point about

has not been as great as origin-

The 500-square metre exhibiusually have difficulty in perthis number of companies to make the trip to Tokyo. Another disappointment has been the extent to which the BEMC bas had to rely on consumer goods exhibitions rather than

on capital goods it was originally designed to promote. No fewer than 10 out of 12

to Peking may have become in the phasing out as a separate psychological importance, bow goods, although at least four the West.

A particular concern among to Japan Unit" which was eatab to improving the bilateral trade originally plaoned for the year. The British embassy in Tokyo gap in Japan'a favour has says that more than balf the grown steadily for the past five exhibitors at consumer goods year's (see table); indeed there shows teod to be companies which are already doing well in Japan and are veterans of pre-

> The fact that relatively few companies have responded to the BEMC's invitations to exbibit in Tokyo has nothing to do with costs; the Centre is heavily subsidised and the extion hall at the Centre can hibitor company has to pay only accommodate up to 25 exhibitors three hundred pounds for a per show but the organisers package which includes free hibltor company has to pay only usually have difficulty in per-exhibition space, freight to and suading more than about half from the UK, and cut price air travel for two executives. What appears to he at fault is the machinery for publicising shows and rouoding np would-be

select potential exhibitors, once It has been determined that widely as does their coverage. 1979.

With a Japanese industrial investment team arriving in Britain this week, Charles Smith examines trade associations the other side of the coin: Japan's low priority for UK exporters

Sometimes trade associations whose membership includes only a portion of the major firms ln a particular industry decline to have anything to do with other major companies in the same industry if they are not members.

Because of the frustrations experienced by the Centre during its six years of operation last year about closing it down altogether and diverting the funds used for its maintenance (about £1,1m per year including costs at the UK end) to other kinds of export promotion.

One possible strategy might have been to put more official money into the staging of con-Japanese department stores so as to belp established exporters of consumer goods (whose costs are coming under extremely severe pressure from the comblnation of a strong pound and the UK's domestic inflation).

In the end the BEMC was machinery for publicising shows and rounding up would-be exhibitors.

The BEMC normally works in Japan and hecause arguably, in Japan and hecause arguably, through trade associations to it has done a lot for some industries. A notable success story is the carpet industry which bas there is a case for holding a held five shows at the centre show in any particular industry. and seen its sales go from quality of these trade £170,000 per year in 1972 to associations, however, varies £2m in the first eight months of

(BRITISH CUSTOMS CLEARANCE FIGURES: £m)

		UK-JAPAN	TRADE		
•	UK exports	Change (%)	UK imports	Change (%)	exports as % of imports
1975	308,5	3.32	671.7	17.83	45.9
1976	359,5	16.54	795.8	16.5	45.2
1 977	468.7	30.37	1,065.9	33.9	. 44.0
1978 1979	547_3	15.71	1,283.3	20.40	42.3
(JanOct.)	515.3	13.8	1,260.3	16.2	40.9
	-				



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June 11

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Internal telephones easy to set up

IN MANY offices, department is frequently a need for an inhouse telephone network totally independent of the external Post Office system.

Many in-house systems are available, but most use conventional line communication techniques and tend to be costly and time-consuming to install.

To overcome this, Siemens is marketing an internal telephone

system that is relatively cheap and simple to set up. extension sets. The system uses interconnecting wiring, and furthermore allows facility allows up to nine extermany additional features to be sions to be called on the same incorporated which are not postelephone systems.
In essence, the "Pamex"

system is a versatile internal feature for stores or service telephone network that can be built up or readily altered to ing feat suit differing and changing re-facility.

changes are available with 20, 48, 80 and 240 extensions. Timedivision multiplexing allows the transmission of two or more speech signals along a common pair of wires by using different time intervals for each speech channel. With conventional Intercom systems multi-core siemens, Windmill Road, cables are required, eg. a 20 Sunbury-on-Thames, Middlesex pair cable.

W16 7HS. 09327 85691.

dealing with telex messages

from Ventek Computers should

appeal to businesses such as shipping, exporting financial

and commodity dealing, where

sending and receiving these

messages can be a time-consum-

ing occupation.

Versatile telex

System, it runs on the company's Datapoint computer. The message is received the procedure is reversed and the message appears.

user composes his messages on the screen using an ordinary typewriter-like keyboard.

The message appears on the screen as well as being printed, and it is also logged.

More from

When the message has been Station House, Harrow Road

your mouth water.

finalised, it is deposited in a Wembley, Middx. HA9 6ER (0) teles: electronic library and 903 6261).

Carrots to make

The use of time-division mulstores, supermarkets, etc., there tiplexing allows systems of more than 1,000 extensions or 19 speech channels to be assembled by compounding several independent exchanges.

Individual "Pamex" telephone extensions bave pushbutton dialling and a fixed loudspeaker. A variant is available with a removable bandset for more private communication.

Pamex bas facilities normally d simple to set up. available only on the most "Pamex" is the name of the modern public telephone netequipment which comprises a works. For example, group calls range of modular exchanges and to two or more extensions are possible and by dialling a given time-division multiplexing for number. a group, general or speech transmission, a tech- paged call can be answered at nique that greatly reduces the the nearest exension.

A common number group number and incoming calls allosible on conventional in-house cated in the event of some extensions being engaged — this particularly valuable departments. Another interesting feature is the conference

The modular exchange system is based on the use of standard printed-circuit boards. Four exchanges are applied to other extensions and automatic standby where the calling extension waits for up -to 30 seconds for an engaged line to clear. To ensure maxi- PACKAGING mum reliability a line control circuit disconnects defective circuits within four seconds of a fault occurring.

(or if it gets the wrong answer-

back) It tries again later.

previously stored machining data is provided by the Acu-Rite PRO system available from Universal Connections, 2, David Road, Poyle Trading Estate, Colnbrook, (Coinbrook 2464).

as he machines.

Bucks It gives the operator the option of working direct from a drawing or from data stored in the memory. Furthermore, if he decides to work directly from the drawing for the first piece, he can reduce set-up time and error by using the

METALWORKING

A SEQUENTIAL read-out of

Machining

data store

This device allows the operator to enter up to 166 movements per axis in two axis systems, or 125 in three axes. In addition, the memory will also accept up to 99 tool designations, nine of which can be programmed for tool offset

DATA PROCESSING dimensioos.

transfer feature to put the

work program into the memory

If a component's design is altered, an editing facility permits the change to be made at any time, without re-entering the entire program. The operator can also recall any step in the program at any time, non-sequentially, so that be can machine non-sequentially if desired.

The .nnit will even comautomatically pre-determined shrinkage expansion of workpieces.

PRO is provided with 200 bour battery-powered protection to prevent loss of programs from power failure.

Sticks when

TRANSPARENT polyester film tape intended for centre sealing and peripheral wrapping of cartons bas been introduced by 3M; it is able to retain a high level of adhesion when frozen, making A STREAMLINED method of queued according to urgency. it ideal for cold storage appli-cations. Designated Y3523, lt From this file the machine automatically selects messages for transmission, calls up the approcan be applied in sub-zero as well as room temperatures. The priate telex number and answerback code, and tries to dial the number. If it gets tape is available to 55 metre rolls, 38 or 50 nm wide, in cartons of 24. answerback it transmits, if not

A second tape, Y8951, has added strength due to glass reinforcement and also exhibits very little stretch. It should prove useful for cold storage palletising applications and for reinforcing fibreboard containers at low temperatures. Additionally, high backing strength and good moisture resistance make the tape suitable for sealing paper or plastics films used in low temperature packing. This product is supplied in 50 metre rolls 12 mm wide packed in cartons of 72.

More from Packaging Systems 3M United Kingdom, P.O. Box 1, Brecknell, Berks. (0344 58395.)

• SECURITY **Protects** valuable

data

CHUBB believes that the majority of small business computer users are not fully aware of the risk they are running if their premiaes catch fire and the computer programs and data, probably beld on floppy discs, are destroyed.

The protection of such mag-netic media is more difficult than for paper records which can be taken to 100 deg. C before deterioration starts. The corresponding figure for mag-netic discs is 65 deg. C, so that Chubb has bad to design special protective safes, the latest of which, at a starting price of £610 is aimed at the small business machine market.

If the VDU/keyboard/floppy disc system not exceeding £75,000 in price is taken as the yardstick, one estimate (by Systime) is that there were 12,000 such machines installed in the UK at the end of last year, estimated to rise to 40,000 by the end of 1983.

Loss of the discs for these users, with no back-up, might incur several thousands of pounds of cost for the programs and many hours of work in re-constituting the data files. quite apart from any loss of business revenue in the mean-

Chubb engineers have made use of the original design of the safe for document protection. basically a surround of material with water chemically bonded into it. At high external temperatures the water is driven out and keeps the cabinet at 100 degrees C. Within this surround is another, consisting of about two inches of an organic insulant which ensures that the internal temperature does not exceed 65 degrees C.

even if the safe remains in the ashes of a fire for ten bours or so, the temperature will still not rise above 65 degrees C inside. The unit is also drop tested through 30 feet to stimulate the collapse of an upper



About £150,000 has been spent by Metalrax on welding and assembly equipment and on phosphating pretreatment and epoxy polyester powder-coating plant for the production of its new Widespan bolt-free adjustable steel shelving at ita Kings Norton, Birmingham works. In this picture inert gas are welding of connectors and ahelf beam sections can be seen

Manages the data base

the business of providing IBM-competitive operating software, has released AROS, a "full function" general purpose data base management system specifically designed for the on-line environ-

Together with the company's existing time sharing, teleprocessing and associated facilities, AROS is said by Altergo to offer a total communications software alterna-tive across the IBM 4300 and 3030 range of computers.

This company claims that there are restraints on existing commercial data base management systems (DBMS) which will not match up to the requirements of the 80s, Maoy are designed for batch workings, have inadequate security lower overbeads in memory and and recovery systems probably processor utilisation and about

Cambridge, a problem can easily arise in organisations in which a number of departments have

acquired their own minl or micro computer or terminal: the machines may not readily be

Now, this company bas pro-

puters, a system first developed

by the Cambridge University

Computer Laboratory as a means

transmission system which is able to achieve speeds of one

megabaud—the equivalent of sending the average sized novel

It is in fact, a packet data

pages in about 1.5

able to interchange data.

Allows machines to talk

ACCORDING TO Toltec Data of Each computer or terminal in

U.S. cities as well as nine Euro-pean countries, Altergo Soft-ware, a leading UK company in ment, and typically are intended ment, and typically are intended for large OS or small DOS users. Use of AROS, states the com-

pany, results in a big reduction of disc input/output and yields a "very fast" response time. Complete security and recovery is built in and there is full comacross operating patibility systems, central processor units, disc technologies and so on. Also there are summary and cross reference segments built in to the data base obviating hold-ups due to one I/O (input/output) depending on the result of another with subsequent chaining through the data base.

AROS contains equivalent features to those found in IBM's IMS and DOS/VS DL/1 plus other offerings, but with far

the ring is equipped with a com-munication station in printed board form and a monitor

station transmits empty packets 38 bits long, 16 of which are used for data.

is electronically marked "full"

Thompson's Lane, Cambridge CB5 SAQ (0223 312347).

its contents are read out

according to Altergo. It is claimed that AROS offers an (IMS).

minals on line accessing a data base spread across 50 3350 disc

are the response times excellent, but ASEA would not be able to run such a large system under IMS. If a more powerful machine than the 3033 were available from IBM to run the system, a conservative estimate of cost savings from using AROS would be £2m to £3m."

terminal approved

approval for the Dex 5100, a new group III digital facsimile

the ring wants to send informaduced a version of DataRing tion, it fills a packet with data which in effect acts like a rapid as it passes that particular postal service between com-The 5100 is a high perform- facility. ance unit capable of sending an together with its own identifica-tion code. As this packet, which checked by each station until the contents are identified by the appropriate station, whereupon More from the company at 24

improvement of 2:1 over IBM's information management system

interesting An quoted by Altergo is an ASEA installation in Sweden. This is an eight megabyte IBM 3033

Altergo comments: Not only

More from the company at 15 Kingsway, London WC2B 6UN (01-836 9075).

Facsimile

INTERSCAN bas gained PO

If a computer connected to terminal.

Slough, SL1 6BS. 0753 70821.

BROADCASTING Radios from Germany

CONSIDERABLE showing of professional radio equip-ment is being made by Rhode and Schwarz at the Communications '80 exhibition in Birmingham (April 15 to 181.

High frequency transceiver XK 104 can be used in stationary or mobile mode under difficult environmental conditions. It has a frequency range of 10 kHz to 30 MHz on reception and 1.5 to 30 MHz for transmitting. Nominal con-tinuous wave power output is 400 watts although this can be attenuated. Emission classes are A1, A3, A3J and the unit can be modified for teletypewriter ROAD TANKERS carrying both operation on F1 sideband or petroleum products and other narrow band.

A new sbortwave receiver will be shown, the EK 070. This has high sensitivity, good large signal characteristics, high intermodulation rejection and remate control of all the operating modes. Frequency range is 10 kHz to 30 MHz.

The company is also introducing transmit and receive units for aviation use covering 100 to 162 MHz and 225 to 400 MHz. This is the series 400, the modular airucture of which allows easy application to the various requirements in this

UK agents are Aveley Electric, Reebuck Road, Chessington, Surrey (01-397 8771).

ELECTRONICS Giving a better balance

COMPLEMENTING Mettler's range of fully electronic, analytical balances is the HK160 from the maker's UK agent, Gallenkamp, PO Box 290, Technico House, Christopher Street, London, EC2 (01-247

This requires no switch weights, has a weighing capa-city of 160g and a readability of

0.1 mg. A single control bar switches switchgear the balance on and off, resets to zero, and operates the tare

function. The balance features a new high-speed readout which Is said to greatly reduce the risk of overfilling or overloading on a target weight. There is also automatic calibration

Data output, peripberal In-A4 document in 20 seconds. It struments—such as printers or also has available a number of computers — can be easily facilities locluding downward attached to the balance, and compatibility an important net-working feature which enables an adjustment system which the 5100 to talk to all group II eliminates external influences terminals automatic document such as draught or vibrations. feed, full duplex operation and an auxiliary copying facility.

Interscan, 39, Montrose Ave., reduces the risk of a wrong result being transferred.

Atlas Copco compressed air systems. Aforce put to

work for you. Atlas Copco

SAFETY Refuelling risks cut

bazardous liquids can be totally immobilised when fuelling, loading or unloading using a proximity switch system already developed Tankers of Bilston for aircraft fuelling equipment. The system also ensures that no spark can be generated.

The company has developed an intrinsically safe magnetically operated proximity switch which incorporates a reed switch embedded in waterproof plastics. The current generated ia in the milliamp range so that even if the cable is severed no spark can result. This primary circuit energises a solid state relay positioned forward of the firescreen which immobilises

the vehicle. In the present aircraft applications the proximity switch is located in a "dead man's handle," or at loading points such that all hoses and line nozzles must be disconnected from discharge poiots and stowed correctly before the vehicle can be driven away. As a final precaution the pumping compartment door must be closed to release the brakes.

More from Great Bridge Road, Bilston, West Midlands WV14 8NP (0902 43141).

POWER

Longer life

METAL-ENCLOSED distribu tion switchgear, incorporating a modular circuit-breaker with vacuum interrupters for controlling electrical power systems up to 36 kllovolts, has been in-troduced by GEC.

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The equipment is the first of its kind in Europe, if not the world. It has all the features of vacuum switchgear in the 11,000 volt category, including reduction of maintenance, simple installation and operation, and long op but applicable to the bigher distribution voltage ranges up to 36kV in the UK and overseas. GEC Distribution Switchgear,

Higher Openshaw, Manchester, M11 1FL. 061 370 4000.



DON'T LET THE NEW N.I. CONTRIBUTIONS CATCH YOU UNAWARES.

National Insurance contribution rates and limits change from April 6th 1980.

The main changes are summarised here but leaflet NL208/April 80, from Post Offices and Social Security offices, gives full details.

CLASS 1 CONTRIBUTIONS FOR EMPLOYERS AND EMPLOYEES. The lower earnings limit below which no Class 1 contributions are payable, by employer or

employee is being raised to £23 a week. The upper earnings limit up to which Class 1 contributions are payable will be raised to £165 The percentage rates of contribution for

employers and employees will also be increased to

13.7% and 6.75% respectively for employees who are

not contracted-out. For those who are contracted-

out contributions on earnings between the limits will be 9.2% and 4.25% respectively. New contribution tables are being issued

direct to employers. But if copies are not received by March 21 apply as follows:

*Not contracted-out tables (CF 391)-local DHSS office.

* Contracted-out tables (CF 392)-Contractedout Employments Group, DHSS, Newcastle upon Tyne, NE98 1YX. * N.I. Surcharge-exempt tables (CF 398)-Col-

lector of Taxes to whom end-of-year tax returns are made. Existing tables will be invalid after April 5th and should not be used for payments of earnings after that date.

Class 2 (flat-rate) contributions for men under

65 and women under 60 will be \$2.50 a week.

CONTRIBUTIONS FOR THE SELF-EMPLOYED.

If you expect to earn less than £1250 from self-employment in the 1980/81 tax year, you can apply for exception from liability to pay Class 2

Class 4 contributions will continue to be at the rate of 5%. However, the lower and upper limits of profits or gains on which contributions are payable will be raised to £2650 and £8300 respectively.

VOLUNTARY CONTRIBUTIONS. Class 3 (flat-rate) contributions will be \$2.40

Issued by the Department of Health and Social Security.



inen -for them their war lives on, every day and in many cases, of course, there is help from a seriou. But there is a limit to what any Govern Department can do,
This is where Army Benevolence steps in. With

The Army Benevolent Fund for soldiers, ex-soldiers and their families in distress Bent, FT, Duke of York's HQ, London SW3 4SP

The company maintains that understanding. With a sense of urgency... and with practical, frameful heip.

To us it is a privilege to help these brave men — and wrinen, soe. Please will you help us to do more? We must not let our salding down.

More from Chubb and Son's Lock and Safe Company, Tottenham Street, London WIP OAA

GEOFFREY CHARLISH

Beware still of Bank advice

BY SAMUEL BRITTAN

in different ways. Professor Miltun Friedman has often proposed that the U.S. Fed. which departed from only in pre-Mr. Peter Jay, before he went to Washington, suggested that Parliament should establish an of errurs of its own. independent Currency Commisstell, bound by a similar and Bank must share responsi-inguida, of which the Bank of billy for the delay in establishwould become an executive agency.

Rules Sir Geoffrey Howe, when Shadow Chancellor, once sug-

returns is surely not to give the Earls, whose directors are the U.S. a good case can be made neither elected by voters nor for the view that the country chosen in the market place, distant more monetary stability becretion in do what it likes, but fore the establishment of the to make it subject to rules. Feil in 1913 than after it is noteworthy, huwever, that the Bank of England has Governors' speeches suggests and been pushing for any of that the Bank line has for a these changes. And with goud long time been to larour a mixreason from its own point of tore of pay controls with some might loosen Ministerial reins, monetary guidelines. At a more they would also reduce Bank of Technical level the Bank of Eng-England discretion. The Bank, land's archaic method of selling as at present constituted, has a stock, which works by creating vested interest in opposing all crises and giving a free ride to elements of automaticity or gilf-edged speculators most bear cutifelines. It prefers the real some of the responsibility for if indefined powers it possesses recent failures of monetary from discretionary action in the policy. As for the design of the

Meanwhile (irere is hitle in the record of that institution which would make une wish it in have particular influence in these areas, which is all to the good under present willi the Prime Minister or the arrangements. But what would Chancellor. In the 1920s, one not give for someone who sound namey for two genera-tions by pulling the wool over lng pre-announced medium-term Churchill's eyes and persuading monetary guidelines - which him to go back to gold at an would be perfectly compatible overvalued parity. In the 1950s with a "lender of last resort"

For Schools, Colleges, 11.25 You

mei Me. 11.40 For Schools, Col-tages, 12.45 pm News, 1.00 Pebble

Do? 2.01 For Schools, Colleges, 3.15 Songs of Praise, 3.53 Regional News for England Tex-

5.55 Nationivide (London and

South East only)

Paddingtoo.

5.40 News.

6.20 Nationwide.

high places to any more auto-

THE CASE for a central bank, put off anti-inflationary policies at arm's length from the govern- by the sheer hadness of argument of the day, has been made ments pul up on their behalf by the Bank. Then in the late 1960s, the Bank used its influence to delay devaluation. independent on thus increasing its pains. paper, should be under an Although the prime responsiobligation to maintain the bility for the numelary exgreath of the money supply plosion of the early 1970s was within a stated range, to be with the Heath Government's departed from only in pre- "dash for growth," the Bank ceribed emergency conditinns, was all loo ready to provide rationalisations occurred, together with plenty

The top levels of the Treasury ing monetary targets in the middle 1970s and the resulting traumatic negotiations with the IMF. The Treasury dragged its target and the Bank more on the means of implementation. should be directly responsible fulfilment has been a gong over the partiament via the appropriate that nothing — were mainly due to the work of the state of the priate Select Committee. He mainly due to the work of did not elaborate a great deal; middle - level officials, with bill the object of any sensible occasional encouragement from Mr. Denis Healey himself. In

A study of Bank of England For zithough such plans short-term and discretionary financial markels, and from ill-fated variable interest stock. being able to put in a word in the less said the better.

Part of the trouble is that the matic framework. If we are to Governor of the Bank of have a monetary constitution, England sees himself not the central bank could look merely as a central banker, but very different to today's Bank as headmaster of the whole of Eagland. financial system,

one gu Norman discredited was content to be indged in

The public interest in 'Mickey Mouse

that runs something like this: the trade unions knew that.
counsel for an appellant in the device of navment t Court of Appeal opens his case anonymous casual workers dehy saying that "this is an appeal feated the claims of the Revenue against the judgment of Mr. to tax since it had no right of Justice Kekewich . . . bul there access to the names from the are other reasons." (Mr. Justice unions, which were not un-Kekewich, a Chancery judge at naturally reluctant to volunteer the turn of the century, had an the information. Once the unfair reputation for always evasion was publicly exposed.

being wrong.) If that story is apocryphal, there is no gainsaying that, in the workers true names. Bul it the last seven appeals to go to also felt that for the past an the House of Lords from the amnesty should be granted; Court of Appeal presided over otherwise there might be a by Lord Denning, the latter's reaction, and industrial troubles, decisioos have all beeo deci- from which the newspaper insively reversed. Any betting man would, there- ence, would ensue.

fore, wager a large sum of money on the reversal on appeal Master of the Rolls' court, declaring that a body of taxpayers represented hy the National Federation of Self-Employed and Small Businesses was entitled to aok the courts whether a tax amneaty granted by the Inland Revenue to caoual workers in Fleet Street was a lawful exer-cise of stalutory powers.* But there are other reasons why the decision is palpably wrong...

screened a programme revealing authorities may be made with large-scale evasion of tax the court's permission, but only liability among about 6.000 men who were casual workers for newspapers. Some of these workers wben signing on for work used fictitious names such as Mickey Mouse and Sir Gordon Richards to disguise their Irue National Association of Free- passage from the judgment of a limited exception in the Local Swift as a "detestable race of ruary 25.

THERE IS A well-worn canard among practitioners at the Bar that runs something like this: counsel for an appellant in the The device of payment to office workers' unions to hoy-

> the Revenue decided to enforce a system for the revelation of

dustry had recent bitter experi-Some self-employed and small chopkeepers felt outraged by of last week's decision from the the amnesty. Why, they asked, should these people get away with a fraud on the revenue. when if we'did it the full might of the tax inspector would be brought down on us? they persuaded their newly-formed association to take up

their cudgels by bringing a caoe

in the courts for judicial

review. An application for judicial lecision is palpably wrong. review of any exercise of statu-A year or two ago the BBC tory power or duty by public the court's permission, but only if "the applicant has a sufficient interest in the matter to which the application relates." This is almost a re-run of the Gouriet case three years ago cerned with relator actions, as courts, when a similar organisation, the indeed it was. But he cites a Thal

cott mail to South Africa.i

interefered with. Wheo the rights can he asserted by indi-Attorney-General declined to viduals, but that public rights beth. Southwark and Lewisham safeguarding the public in-

Individuals and the courts have it is considered expedient for Since trade unions are not allowed them liberal access the promotion or protection of public authorities, Mr. Gouriel under a generous conception of the interests of the inhabitants. had to seek the leave of the locus stondi." What Lord It was under that power that ing legal action? In the Middle Attorney-General, under what Denning omitted to observe was Mr. Justice Woolf last Monday Ages, when the common inis called a relator action, to that Lord Wilberforce also said declared that the Secretary of bring an action to enforce a it was a fundamental principle State for Social Services had public right not to have its mail of English law that private acted unlawfully in transferring

THE WEEK IN THE COURTS

BY JUSTINIAN

Couriet, the Court of Appeal under Lord Denning held that that was not a complete har to a citizen coming to the

The House of Lords, however. unanimously and uncompromisingly held that the courts could oot question the Attorney-General's right to control access lo the courts to enforce public righta; he alone was the protector of public, as opposed to private, rights.

Attorney-General as representing the public. In general, no private person has the right of can be struck out."

And Lord Wilberforce went on to hold that to allow unrestricted access to individuals seeking enforcement of a public public duty that marks out the right is contrary to our law. National Federation of Self-A private individual cannot sue on bebalf of the public for from the common informer, the the purpose of preventing pub-Now Lord Denning has tried lic wrongs, though he may do to distinguish that ruling of the so if he will sustain injury as as a means of enlisting the taw Lords, by saying that a result of that wrong. But enforcement of the law has State for Social Services, ex Gouriet's case was only con-only then may he come to the always been regarded as object parts the London Boroughs of Gouriet's case was only con- only then may he come to the

Thal is why Parliament made

OPERA & BALLET

THEATRES

give bis go-ahead to Mr. can be asserted only by the Area Health Authority (Teach- terest. ing) to five named commiswere suspended from office, but no patient in one of the bos-pitals could bave done so, let alone an ordinary citizen of

Blackbeath or Lewisham. So wby should the body repre- tect them. senting self-employed people and small businesses who are representing the public in the not directly invalved in the assertion of public rights: "If newspaper industry bave a he tries to do so his action right to come to the courts about the tax liability of Fleet Street ' casuals ''?

It is only the absence of any reward for the enforcement of a employed and Small Businesses familiar creature who bit the Office Workers and others dust in 1951. Financial reward [1978] A.C. 435. tionable. Such a hreed of litt-gants was described by Jonathan work, Timea Law Report. Feb-

enforce the law.

But is envy of others any more laudable a motive for takformer finurished, it was not unknown for proceedings to be brought solely for purposes of revenge without any thought of

That is why the law insists sioners. Doubtiess the members today that the public interest is of the AHA(T) could have to be printected by a minister brought an action since they answerable in Parliament; and that the citizen should look to protecting his individual interests in the courts while public interests are publicly pursned by those appointed to pro-

Busybodies are not to be encouraged to use the legal machinery to pursue their vendetten other than through the recognised channels of complaint

 Reging v Inland Revenue Commissioners. ex parte National Federation of Self-Employed and Small Busi-nesses Ltd. Times Law Report. February 27.
Gourget v Union of Post

Defeated Gleason still popular

GLEASON, although failing to as fil as any in the field, and Cup picture is becoming more maintain an undefeated record ready to run the race of his unfathomable as far as backets maintain an undefeated record over the minor obstacles when being beaten by Jubilee Saint on Salurday, is now vying for favouritism with Torenega in the ante-post market for the Daily Express Triumph Daily

It is difficult to know whal to make of the four-year-old's

RACING

BY DOMINIC WIGAN

performance in going down hy three-quarters of a length to Jubilee Saint in the £8.000 Victor Ludorum Hurdle, On the one hand it can be argued that his narrow failure to give that lalented oppooent 5 lbs after a long lay off, was a fine effort; on the other, it must be reported that Gleason looked

BBC 2

10.30 The Handlcapped Family. 11.00 Play 'School (as BBC1 3.55 pm).

2.30 Roads to Conflict. 3.00 That's the Way the Money

Goes. 3.30 Delia Smith's Cookery

4.00 Modern Language Teach-

6.50 Training dogs the Wood-

bouse way. 7.15 Mid-Evening News Includ-

ing sub-litles.
7.30 Rock Goes to College.
8.15 Marii Caine.
9.00 Yes Minisler.

10.20 Russian -- Language and

LONDON

9.30 am Schools Programmes. 12.00 We'll Tell You a Story. 12.10 pm Raiobow. 12.30 Numbers

at Work. 10.00 News, plus FT Index. 1.20 Thames News. 1.30 About Britaio. 2.00 Food, Wine

and Friends. +2.30 Mooday Matinee: "The Amorous Prawn."

4.15 Ctapperboard, 4.45 Jukes of Piccadilly. 5.15 Money-Go-Round.

7.00 The Kenny Everctt Video

6.00 Thames News.

7.30 Coronation Street.

9.00 The Sandbaggers.

8.00 Rushton's Illustrated.

World in Action.

10.30 Monday Fllm: "Men at

the Top."
12.10 am Close: Rita Tushing-

All IBA Regions as London except at the following times:

(S) Stersophonic broadcast

ham reada poems hy Roger McGough

6.35 Crossroads

10.00 News.

RADIO 1

9.30 Horlzon.

People. 10.45 Newsnight.

4.50 Open University.

2.15 pm Let's Go.

The formbook, too, presents a

a number of smart efforts against such as Torenega, This there. Song For You and Penscynor Disn Song For You and Penscynor Dismond Edge also failed to in his home country; but on a show anything like the jumping line through Hill Of Slane (twice a runner-up to Gleason) Torenega's claims to favouritism for the March 13 event still staod out. For Batchacre Hall slammed Hill Of Slane and 15 others in the Triumph Hurdle Trial after proving inadequate against Torenega In

Torenega has since reconfirmed his status as Ireland's leading novice of his age by giving 8 lbs and an eight lengths beating to Bennaumore Leopardstowo Stillorgan Hurdle.

An already confused Gold

ANGLIA

ATV

BORDER

1.20 pm Border Nows. 2 30 Mondey Matinse: "Sunstruck." S.15 University-Challenge. 2.00 Lookeround Monday. 0.16 Collecting with Curns. 10.29 Border weether. 110.30 Monday Movistime: "Tho Pumpkin Exter." 12.25 am Border News Summary.

CHANNEL

1.20 pm Channel Lunchtime News, What's On Where and weather. 12.00 The Monday Matineo: Great Cathenne." 3.45 Food, Wine and

Catherine." 3.45 Food, Wine and Friends. S.15 University Challenge. 5.00 Channel News. 6.10 Lone Renger. 10.28 Channel Late News. 10.36 The Perdoe Programme. 11.05 Fantaay laland. 12.00 News and weather in

GRAMPIAN

S.25 am First-Thing, 1.20 pm North News Headlines. 2.30 Monday Matinoe: "The Blue Lagoon" atamng Jean Simmone, Oonald Houeton and Cyril Cuaeck. 5.10 Wild, Wild World of Animela. 2.00 North Tonight and Araa weather forecest. 10.30 Refectione. 10.35 The Monday Move: "Beliverance." 12.30 am North Late Night Headlines.

GRANADA

1.20 pm Granede Regorts, 2.00 Monday Metinee: "Ir'e Good To ae Alive."

2.45 Food, Wine and Friande, 5.10
This le Your Right, S.15 Croseroade,
6.00 Graneda Rogorts, 6.30 Selwyn,
10.30 Nuts and Solts, 11.00 Mystery
and Imagination: "Fear in the Night."

1.20 pm Ropor West Headhnoa. 2.00 Hero Today. 12.30 The Monddy Maimas: "Morgan—A Suitable Cess For Troatment." 5.15 Oick Trocy. 5.20 Croceroads. 6.00 Repon West.

11.05

10.05 Food, Wine and Frienda. 11.60ap. 11.35 The Mackanala Affair.

are concerned, for Silver Buck in no way enbanced his confusing picture. Ireland's Cheltenham prospects Victor Ludorum representative, scrambling home at Hereford Batlsia, made little show after after an inept display of jumping over the modest fences

> ability necessary to navigate the Gold Cup course at Wincanton recently, and the con-nections of Border Incident and Approaching must be increaslngly optimistic for their charges' win - and - place prospects.

> > LEICESTER 2.45—Son And Heir 3.15—Shannon Bridge*** 3.45-Royal Exile*

WINDSOR 2.00—Concert Hall 3.30—Strathelyde 4.00-Palaestrina**

HTV Cymru/Weles—As HTV West/ HTV General Service except: 10.05-10.20 em About Weles. 12.00-12.10 pm Trahetiau. 1.20 Penawdau Newyddion y Oydd 1.25-1.30 Report Wales Head-ines 4.46-6.16 Ser 6.00 Y Oydd 6.30-7.00 Report Wales. 8.30-8.00 Yr 1.25 pm Anglia News. 12.00 Monday Film Matinse: "And Then There Were None" 3.45 Food, Wine and Friends. 5.15 University Challenge, 6.00 About Anglie. 10.30 Closs Question. 11.00 The New Avengers. 12.00 A aig Country. 12.30 em Reflection,

SCOTTISH 1.20 pm News Headlines and road and weather report. 2.00 Monday Melines: "Moon Zero Two " 3.45 Food, Wino and Frands. S.15 Carloon. 1.20 pm ATV Newsdesk. 2.00 andezvoue with Romance: "A Nice Rendezvoue with Romance: "A Nice Girl Like Me " 3.45 Fpool, Wine and Friends. S.15 Carloon. Friends. S.15 The Television Programme 6.00 ATV Today. 10.30 Lett. Right and Centre. 11.00 ATV Nowsdeak. 10.30 Monoywiso. 11.05 Barmoy Miller. 11.35 Divorce and After. 12.05 em Something Oiferont.

SOUTHERN

1.20 pm Southern News. 2.00 Food, Wine and Friends. 2.30 "Stolen Houre" starring Susan Hayward 5.15 Olick Tracy Carloon. S.20 Crossroads, 5.00 Oay by Oay. 10.35 Music in Camers. 11.20 Samey Miller. 11.50

TYNE TEES

B.20 am The Good Word Iollowed by North East News Headlines. 1.20 om North East News and Lookaround. 2.00 Food. Wins and Friends. 2.30 Monday Matinee: "The Blue Lagoon." 5.15 Mork and Mindy. 6.00 North East Nows Headlines. 8.02 Crossroeds. 6.25 Northern Life. 10.30 Northern Report. 11.00 North East News Heedlines. 11.05 Monday Movie: "Gone to Ground." 12.30 sm Epilogue.

ULSTER

1.20 pm Lunchime. 2.00 Monday Matnee: "Greet Catherine" starring Peter O'Toole, Zoro Mostel and Jeanna Morsau. 3.45 Food, Wine and Friends. 4.13 Ulster Newa Headlines. 5.15 Carloon Time. 5.20 Croseroads. 6.00 Good Evoning Ulater. 10.23 Ulster weather. 10,30 Ballymascanion 7990. 11.00 The Odd Couple. 11.30 Gardening Today. 11.55 Bedtime.

WESTWARD

1.20 pm Westward Nawe Headlines 10 The Monday Majines: "Great 2.00 The Monday Majines: "Great Cethanne" starring Peter O'Toole. 3.42 Gus Honeybun's Birthdeys. 3.45 Food, Wine and Friends. 5.15 University Challenge. 6.00 Westwerd Biary. 10.32 Westward Late News. 10.36 The Pardos Programme. 11.05 Fantasy Island. 2.20 Fable for Lie. 12.05 am Programme. 11.05 Fantasy 12.00 Faith for Life. 12.05 am

YORKSHIRE

1.20 pm Calendar Nowe. 2.00 Monday Maturas: "Great Cathorine" distring Peter Il Toole. 3.45 Food. Wine and Friends. 5.16 University Challengs. 6.00 Calandai (Emilay Moorend Ralmon) editions]. 10.30 Country Calandar. 11.00 Police Story.

RADIO 4 6.00 am News Briefing. 6.10 Farming Wask. 8,25 Shipping Incressel. 6.30 Today trom Rhodesia, including 6.45 Proyer for the Day. 7.00, 8.00 Toddy's News, 7.30, 8.30 Naws headines, 7.45 Thought for the Oay. 8.35 Tho Woek on 4. 8.45 Miles Kington with the 88C Sound Archives. 8.00 Mowa. 9.05 Start the Wask with Richard Sakor. 10.00 News. 10.05 Money Box. 10.20 Oaily Service. 10.45 Slory Tima. 11.00 News. 11.05 Ganetic Revolution. 11.50 Poetry Plassel 12.00 Nsws. 12.02 pm You end Yours. 12.27 Brain of British 1880 (S1. 12.55 Wasther: programme nows. 1.00 The Morey Silvers and Programme Roys. 1.05 Morrid at Ons. 1.40 The Archers. 1.55: 12.00 Qave Cash (S1. 3.00 pm Rogor) Wather: programme nows. 1.00 Tho World at One. 1.40 The Archers. 1.55-Shipping tolecest. 2.00 News. 2.02 Women's Hour. 3.00 News. 3.02 Llaten with Mother. 3.16 Alternoon Theatre [S]. 4.45 Short Stary. 6.00 PM: naws megazins. 6.50 Shipping

5.55 Wasthar;

6.00 ann As Radio 2. 8.30 Rush Hour.
10.03 The Robbie Vincent Telephond
Progremme. 1.03 pm London Live.
2.33 Idoal Home Showcest. 4.30
Lendon News Desk. 6.35 Look, Stoo.
Lraten. 7.03 Black Londoners. 8.00
Question Timo Irom the House of
Commines. 6.00-5.00 sm Join Radio 2.

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COLISEUM. Credit cards 280 S25d. Retervation: 736 3181, Evgs 7.30. Mar Sats 2.30. LONDON FESTIVAL BALLET Tomor Wed & Thurs: Overak Valistisms Sphina Petrouchia. Fri & Sat. La Svighise. Sphina Petrouchha. Fri & Satt. La Sylghide, COVENT GARDEN. CC. S. 20 1056, 10 Generichaea credit cards 836 5003; THE ROYAL BALLET, Ton 17.30; Four Schumenn PiecesiA Month in the Country Schumenn PiecesiA Month in the Country Elite Synonpations, 7hu 7.30; La Fille mai pardee. THE ROYAL OPERA. Tomor & Fr. 7.30; Lugene Owegla. Wed 6.30 Sat 5.30; Lohengrin, 85 Amohi, seats avail, for all perfs, from 10 am on day of perfs. PODENIX THEATER, CC. 01-235 2294,
PROENIX THEATER, CC. 01-235 2294,
PROENI SAOLER'S WELLS THEATRE, Rosebery Ave. EC1. 83T 1872. CC. 83T 3856. Evgs. 7.30. Mst Sal 2.50. From Tomor RTISH BALLET COMPANY & THE CNIEFTAINS Flayboy of the Woslern World.

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& Warehouse Th.

PRINCE EOWARD, CC. 01-43T 68TT.

Evds. 6,00, Mats. Ther. and Sat. at 5.00.

EVITA Ov Tim Ric and Andrew LigydWebber. Directed by Hardd Prince.

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CUEEN'S. S. CC. 01-724 1465. Hall-price oreys. 10 & 11 March 3 pm. Opens Mar 12th 7 om JANE ASHER, MICHAEL GOUGH, PHYLLIS CALVERT IN BEFORE THE PARTY by Rodney Ackland. Story by W. Somersc; Maughah. Oirected by TOM CONTI.

RAYMONO REVISEAR, CC. 01-T34 1593 At 7 00. 9.00, 11.00 cm. Ilpons Suns, FAUL RAYMOND presents THE FESTIVAL OF EROTICAS New Acts New Girls, New Thillis, 23rd Sensetional yob?. Fully air-conditioned. RITYAL CHURT, S. CC. 730 1745, Ever 8. Sat 5 & 8.30. THE LIBERTY SUIT. ST. MARTIN'S. Credit Cards. 836 1443. EYS 8.00. Tues. 2.45. Sat S.00 and 8.00. A GATHA CRISTIES THE MOUSETRAP, WORLD'S LONGEST-EVER RUN SEIN YEAR.

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4.30. 7.30.

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overscas (6) airman 23 Inform whimsical following (8) 24 Arlicie returned lu Fleet St. 16 Technical soldiers turn up

25 Base rhythm during the 17 Making as profit from npen interval (8)

with names of winners next Saturday.

gun (G) 3 Slay with soldiers on the sea (6t 11 Stranger, not among the 4 Vessel on the way down is glowing (10)

6 Junior doctor or poet we hear (81

ing of the stars (8) 15 Send around sleep rock for

neck-meat (5-3) with chap suddenly (8)

space in wood 181 Smoker putting fuel round pnles (6)

the Hill. 5.55-6.20 Wales Today. 6.45-7.15 Heddiw. 9.25 Festival of Welsh Mixed Voices at the Albert Hall, London, 16,00-11,25 Bargen.

Wales. Scotlaoit-11.00-11.20 am For Schools. 12.15 pm It's a Great Life. 12.40-12.45 The Scottish News. 5.55-6.20 Reporting Scot-

rept London), 3.35 Play School, 4.20 Tottche Turtie, 4.25 Jackanory, 4.40 Heyyy, 11's the King, 5.00 John Graven's News-round, 5.05 Blue Peter, 5.35 for Scottand. Northero Ireland-3.53-3.55 pm Northern Ireland News. 5.55 Scene Around Six. 6.20-6.45 Land 'N' Larder. 11.50 News and Weather for Northern Ireland.

11 50 Weather/Regional News. Wales—1.45-2.00 pm Pili Pala, 4.40-5.05 Isla and the Farm on

tand. 11.50 News and Weather

6.40-7.55 am Open University.

All Regions Bs BBCl except

After the Elections.
9.00 News.
9.25 The Monday Film: "The Pursult of Happiness" slarring Michael Sarrazin.
9.55 Film S0.

England-5.55-6.20 pm Lonk

10.55 Film So. 11.25 Education Matters.

 Indicates programme in black and white as follows: 6.40-7.33 am Open University

11.50 News and Weather for

+5.40 Flash Gordon. 6.00 James Burke's Connec-

8.10 Panorama in Rhodesia: After the Elections.

6.45 A Question of Sport. 7.15 Blake's Seven. East [Norwich]; Look North F.T. CROSSWORD PUZZLE No. 4,215

5 Essay or article to little 9 Diet initially taken subject 10 Set tree but it's ratien (6)

14 Mark Latin article hut it 7 No cards 1 shuffled when

(10)
22 A second-class thoroughfare 13 Test the accuracy of transverse restraint (5-5) district that makes one sick

26 Excessive fondness for a small spot before time (6)

27 Raisc aloft lamp in window 20 Revnlt is in arena (6) The solutinn to last Saturday's prize puzzle will be published

over 100 m.p.li. (6) 2 Deny heing horn hulding

sneering 181 8 Team with genuine follow

appearing

10.00 Lindsay String Quartol concord, oat 1 [S]. 10.4S Interval Reading. 10.55 Concert, part 2: 11.35 23C Wolsh Symphony Orchaptra [S]. 1.00 pm Nows. 1.05 BBC Lunchtims Concert 21 Give evidence at trial (6)

#Madium wave
5.00 am Ao Radro 2. 2.00 Oave Lée
Travia S.00 Simon Bates. 11.31 Paul
Burnett. 2.00 pm Andy Peeblos. 4.31
Kid Jánson. 7.00 Stayin' Alive 8.00
Mils Road 8.50 Newsbeat. 10.00
John Feel (S). 12.0-5.0 am As Radio RADIO 2

KADIO Z
5.00 am News Summary, 5.03 Stave
Jones [5], 7.32 Ray Moore (S] including 8 27 Racing Bulletin, 8.45 Paues for
Thought end 9.03 Favourits Pive
Singles, 10.03 Jimmy Young (S],
12.03 pm Oavid Homitten (S], 2.03
Ed Stewart's Requeat Show (S], 4.03
Much More Music [S], S.00 Nows,
5.05 'Waggoners' Walk, S.20 Much
More Aware [S], 8.03 John Ouan (S],
8.02 The Organist Entertoins (S), 2.30
Folk 80 [S], S.02 Humphrey Lyttetton 8.02 The Organisi Enertoins (8), 8.30 Folk 80 [5], 8.02 Humphray Lyttelton with the Basi of Jazz on records [5], 8.55 Sports 10.80 Km Too Thomas Movie Quiz 10.30 Star Sound, 11.02 Arian Mothew with Round Midnight, including 12.00 News, 2.02-5.00 am You and the Night and the Mueis (8). RADIO 3

\$5.SS am Woother, 7.00 News, 7.05 verture (S] 8.00 News, 8.05 Morn-ing Concart (S), 9.00 News, 9.05 his Wook's Composer: Brahms (S).

(S). 2.05 Marines Mudicate (S). 3.05 Music for Ilrgan (S]. 3.45 Now Records (S]. 4.56 News. 6.00 Meinly For Pleasure (S] (± snd mono only from 6.20). 7.00 Stravinaky (9]. 7.30 0. H. Lawrenco—50 Yeers Leisi. 8.15 Jessye Norman eong recgal: part 1. Heydn, Arahmg (S). 9.15 Tho Vision of Piara tha Ploughman (S). 9.40 Jasaye Norman, part 2: Rovel, Strauss (S). 10.25 All tha Human Frama Raquires. 10.40 Clifford Senson piano recipil (S) 11.25 Jaza in Antaia (S) recipi (S) 11.25 Jeza in Antain IS)
11.55-12.00 News
VMF only—6.00-7.00 am and 6.207.00 pm Tipen University.

lorecast 5.55 Wasther, programme news. 6.00 News. 6.30 Frank Murr Goes Into . Languages (A). 7.00 Nawd. 7.05 The Archers. 7.20 Science Now. 7.4S The Mondsy Pley (S). 9.00
Three Women Gardeners. 9.30 Keleidoscope. 2.59 Weather. 10.00 The World
Tonight. 10.30 Tho News Qurz (S).
11.00 A Book at Beddme. 11.15 Tho
Financial World Tonight. 11.30 Today
in Parliament. 12.00 News BBC Radio London

A.00 am Graham Dené's Breoklasi Show (S]. 9.00 M cheel Aspel (S]. 12.00 0avo Cash (S]. 3.00 pm Rogor Scott (S]. 7.00 London Todey (S). 6.00 Epen Lina. 8.00 Alan | "Fluff") Froaman (S]. 11.00 Tony Myen's Lato Shew (S). 2.00 am Peter Young's Night Flight (S].

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THE ARTS

Wigmore Hall

Fauré

by DAVID MURRAY

On Friday the Songmakers' many passages, for example, Almanac presented a biography- which can seem to depart from with-songs of Gabriel Fauré. Devised by Graham Johnson, the script was a model of tact and concision, though it may be A sense that not all the remarked that the known details threads were firmly in band of Faure's life shed singularly little light upon his perfectly over-emphatic swells from the self-contained music. In two piano, when the singers were and a half hours there was room interpretatively diffident. Everyfor 25 of his songs too, with four others by his friends and a little the idinm of the early and plane music. It all made an middle songs; Sarah Walker piano music. It all made an evening of civilised pleasures, if ately out of focus.

The pleasures were many and real—only a long view of Faure was missing. The great melodies of his last period come in cycles, which does not suit the Almanac formula of four singers taking continual turns; we bad to be content with snippets from those cycles, each one diminished out of context. Even the middle-period Bonne Chanson was represented just by its concluding song, full of musical backreferences that bere referred to nnthing. Richard Jackson was sensitive hut aubdued with one of the robust Horizon chimerique songs; a stylisb account of "Danseuses," from Mirages, by Martyn Hill (whose confidence grew as the evening progressed) missed the visionary intimations of its last verse. The opening song of the Chanson d'Eve suc-ceeded hest, virginally etched hy Jennifer Smith. To the unconverted, late Faure may still intense in early Debussy. Johnhave seemed too much of a son had a delectable find in a gentle muchness. Mr. Johnson, little piano plece by Charles accompanist as well as deviser, Koechlin, "Hommage musical a sounded less assured bere: there Gabriel Fauré." I wisbed we was too much anxinus insistence could have had Ravel's Berceuse on first beats, and the exact on the master's name, too, but sense of the elliptical barmonles presumably nobody in the

the tonic key and return to it without baving been anywhere much, and that was how they seemed.

prohably accounted for some one was more confident with made most of her share of rarely more than that; there them, admirably communicative were few sharp insights and the later Fauré remained obstinMr. Jackson and Mr. Hill took longer to warm up, but once out of the ahallows of balf-vnice did persuasiva justice to them-selves and their music. Hill and Miss Smith were charming in their duets, particularly the lovely "Pleurs d'nr."

The songs by Faure's contemporaries must have been chosen for contrast rather than for analogies - each composer wrote music more like Fauré'a than any we were given - but they enriched the programme. Hill was notably perceptive with Saint - Saens' opium - fantasy "Tnurnoiement" (Jnhasan did not meet Saint-Saëns' standard of fleet toncb, thnugh) and Ravel's Ronsard auto-elegy. Miss Smith sounded uncharacteristically tight in Duparc's "L'Invitation au voyage"-unfair tn ask her to hegin cold with that song after spoken narration — hut limpid and was often left vague-there are Almanac doubles ou violin,

Goethe Institute

Herbert Henck

the snatches we they kept individuality enough occasionally hear, contemporary for a comparison with Chopin's German music appears to be Preludes, likewise turbulent, thriving if incredibly diversified, funereal, pensive—nut in seem German music appears to be forman music appears to the forman music appear them under the shadow of a fnurth: his mighty rendering of Stockhausen's Kluvierstück X

summed up the concert. Wnlfgang Rihm (b. 1952), already a prolific and—at home -important figure, made the their puckishly altered pitches strongest impression. His came over as what must be one Klavierstücke nos. 5 and 6 were of the first live imitations of played as a pair by Henck, as synthesized sounds, roughly bentied their respective

Herbert Henck moods of violent grief (No. 5 is exceptional player, committed subtitled Tombeau) and sub- to perfectionist interpretations ducd whimsy (No. 6 is called of the music he so passionately virtuose in style—piano music could not unity play Stock-by both Brahms and Schoenberg bausen's numrious tenth Piece alluded to-the pieces suffer from a rather jejune insistence but do so from memory without

129.05

the interior of the plann to be thoroughly "prepared" with earth or stone which would ideally come from the cnm-poser's own locality, Franconia. Thus damped, the native folkdance rhythms of the piece and His came over as what must be one

Herbert Henck is a quite Romantic and supports. What other plants -rife with cluster-glassandi nn over-emphatic note-centres a single slip—and also have and monodic and unison contrivances; No. 6, moreover, was too long, though variegated. Yet

Once in a Lifetime

Pany's two great commercial Jazz Singer, in 1928.

Nnt that Once in a Lifetime successes of last year, Piaf and one in a Lifetime, are being along. Perhaps the skill of transferred to the Piccadilly. For Trevor Nunn's bustling direction Once in n Lifetime, which and the central performance of arrived on Friday, there could Richard Griffiths as that stock be no more appropriate theatre. Hallywood character, the faol This Hart and Kaufman extrava-ganza of 1930 deals with the im-than Bart and Kaufman's pre-Viraphone system, the voice of and escapism there is little in the "talkies." The Piccadilly, London to match it. then a cinema, was the first in

The Royal Shakespeare Com- London to show a "talkie," The



Glasgow Citizens

A Waste of Time

by MICHAEL COVENEY

with a triumphant procession of snapabot scenes, the work of Le, theatrical artistry, Le., of the director/designer Philip Prowse.

rather than with the life of

In many respects the produc-

tion is another in the Citizen's

distinguished line of salon world drama, a line that includes Lermontov's Maskerade and

Coward's Semi-Monde. But I do

not think that the company's panache in matters of illusion,

multiple setting and sheer unity of purpose has ever heen seen to better effect. Mme. de Ville-parisis is at the centre of a card

school who sbift around in each

Just as Marcel, in the novel, will digress in the middle of

gathering to reflect on a breach

cations of the Drevfus affair, so

Messes. MacDonald and Prowse

are uninhibited by the demands

of narrative consistency, allow-

ing that consistency to emerge

eventually. So, it is not until the middle of Act Two that we

know the Phedre actress to he, not Berma, but Rachel, when we

are treated to a vivid backstage

scene, done with a full comple-

gents in top hats, eye-level

ighting and a jangled, dream-

brothel, cowering among

of langunrous pierrnts.

Marcel.

is remarkable.

in a gilded picture frame. The arrived in Combray and mucher th a glided picture frame. The has no message for Françoise, curtain sweeps aside. The Ha stands still as the Marquise

The picture frames provide progressively raised levels. Plush chairs. Lights up on a glittering tahleau. Silence. The muiled sound of white glines when the chairs are the controlled to the con muffled sound of white ginves applauding. We bear that the Duke is still, at his age, baving affairs. Marcel — hunched, worn, drained—pivots away from the scene, Gilherte is in mey, His love for her was a habit, a dream, There is Madame Verdurin, coarse and load her hair bunched in a lord, her hair bunched in a ginger mop. That Vinteull sonata will give her a headache, she screams. It is played. softly, as Marcel asks a prim

tine. And how often.
For one week only the Glasgow Citizens is offering Robert
David MacDonald's three-and-ahalf hour version of Prnusts

little Andree what exactly it was she used to do with Alber-

and Odette, Marrel and Albertine are cleverly justenesed. The first couple embrace nassionately at the plano as. downstage. guizzes of social efforette or the impb-Marcel Albertine as she dangles provocatively from Louis Quatorze in her underwest. The fare-well and reconcillation are played nut. Swann wants to know about lesbiavism from Odette. She screams at him then swaggers nff, gorgeously, adjusting ber bair and exposing her neck. Swann tells Marcel he

bas wasted yaars of his life. Mr. MacDonald's approach is to work backwards through all the characters, intercutting just non - chronological enough material to keep us informed. A I'm version-as Harold Pinter's Proust Screenplay (which is still awaiting a production) so hrilliantly demonstrates — bas the luxury of voice-overs, access to physical Proustian emblems such as hawthorn, steeples, the yellow patch in Vermeer's painting, and the cinematic advan-tage of establishing mood through silent expressinn and the cinematic advantage of

with soldiers arriving to the strains of "Pack Up Your Troubles" accompanied by old tempi. On the stage—and this rather I have, at the incomparis the show's chief weakness—able de Charles He incomparit is almost impossible. it is almost impossible to conbeen knocking around since the vey what Marcel is thinking opening tableau and, in Giles when be's not talking. Steven Havargal's somewhat bold and Dartnell looks up into the gods when he catches the Vinteuil wheedling performance (full of irritating whines and phoney

The preacentum hillows with phrase. He sobs loudly when, laughter) we are treated to the a huge black curtain contained at the end, we have at last sight of a lavisbly furred sliming a gilded picture frame. The arrived in Combray and mother line de Charlus. No matter: his ascendancy in the salon, here portrayed with typical nff-centre curtain sweeps aside. The ture frame recedes in the shape of Villeparisis — who incorporated on the upstage focal print of an actress reciting from Racine's Phèdre. The picture frames provide ture frames provide ture frames provide ture frames provide tall him that he should strive to the final act we see description of the stands still as the Marquise portrayed with typical nu-centre has an exercise in distribution frame and times of M. de someone (Mme Verdurin) too Norpois—interrupts her perpetentious and stupid to be varied in the picture to ally traced to its street-corner tall him that he should strive origins. fnr halance and judgement and that "a man who doesn't work doesn't count." Marcel's reso-lution at the end simply does not come across. We are left

In the final act we see de

Charlus accosting Jupien with talk of cigars, tha first hint in the work that people of like sex are attracted to each other. Other social highlights of the novel are done full justice: Swann confides to Marcel in the course of that marvellous comic scene when Oriane, the Duchess. is off to a party in spite of Swann's declaration of impending martality. The show off invitation is carried on in a judicrously use envelope. There is time I change Origne's red shoes, but not to sock up Swann's news. Again, the refection scene—second only, in my Eal - is superbly well done Morel, with bls Beethovenish repertoire - quite late on you realise you have been listening

by our own royals. Mr. Dartnell is neutral throughout, his neutrality highlighted in the dramatic device of having the interrogated Albertine played hy hoth the sexually inquisitive Angela Chadfield and a Cherubino page hoy, Rupert Farley.

a sexual compromise à trois. At the end, we see Françoise chasing a chicken, we hear the hell at the garden gate, we see just about (had blocking), the fumbled wrestling match between Marcel and Gilberte. Allowing for the Citizens' resources and its status in the like music hall hackground British theatre, this evening is noise. Within five minutes we a gargentuan achievement. But

rre watching the Baron de Charlus track Morel to the note. It could have been hrilliant. With, perhaps, Charles potted palms as a line of girls as de Charlus, Ian straight out of Sweet Charity bump into view and, for that as Mme Verdurin . . . Cannot matter, each other. Earlier we this enterprise and this talent bave had a strange vising of de Charlus's brothel in the war, be injected into our mainstream classical tradition? The Citizens has prospered in isolation for ten years. This show will not, I gather, he seen in London. Theatre people in London must earry the can for that disappointment. Wa have a major company ready to come home. From Glasgow. They must be sup-ported and encouraged to dn so. Glasgow's loss would he the national theatre's incontro-

vertible gain. Nnw is the hour.

Duke of York's

Rose by B. A. Young

haviour are lower-bourgeols standards, their appearance uninteresting. Yet their joys and tiva in expression, are Daker), a dull executive who plercingly moving. The emo-spands his evenings at meettions of the inarticulate are like ings hut from whose life the ingenious designer). The the emotions of children, they romance has leaked away, director is Alan Dosaror, who have to be mined for. Mr. Davies has done this and come

up with a crock of gold.
Rose is a primary school teacher from a simple family, with a simple husband and, no doubt, simple children, though we hear of these without meeting them. She has what her friends and colleagues would call advanced ideas. She defends bomosexuality to the two spinsterish women with whom she shares the staff room at school. She proposes that parents should be allowed to wander round classes. Her friends include a former rock-singer about to get rid of her drunken

pop-composer inver. Glenda Jackson'a fina performance bas got ber exactly, her mouth moving in a cypher of significant mones as she listens patiently to her mother's complaints or her colleagua's diatrihes. She is almost in danger of joining the dreary gang berself; but hesides her advanced ideas she still retains

a live spark of romance.

Mr. Davies's first act consists

Andrew Davies's unusual of little more than introducing figures are set to work and their ability shows in this: all the the characters that surround his emotions exposed. A play that characters in Rose, apart from heroine. There is her mother has till then relied in the Rose herself, are deliberately (Jean Heywood speaking Scottish sardonic observation of ordinary (Jean Heywood speaking Scottish sardonic observation of ordinary drawn as stereotypes; their dialogue in a Midland accent); people glows into a quite new thought, language and be-the two schoolmistresses life, and ends in poignant sorthe two schoolmistresses life, and ends in poignant sor-(Stephanie Cole and Gillian row. Not that the earlier Martell), Sally (Diana Davies), scenes have ever been less than the singer, and Jake her drink-entertaining. There are some their sufferings, everyday as ing mate (Richard Vanstone), they are in origin, unimagina- her bushand Geoffrey (David

> school and fires Rose with desire, or anyway curiosity.

entertaining. There are some delightfully comic moments. Sufficient props are carried on for each scene, with no permanent set (John Gunter is

Then there is Jim Beam, the incorporates the stretches of Primary Adviser (Tom George recounted narrative and direct son), who comes one day to the address to the audience ao smoothly you accept them as readily as the able acting in tha In the second act these lay more conventional scenes.



Glenda jacksor

Festival Hall

Brahms by RICHARD JOSEPH

of style and compositional and sophisticated, resembling an interpretation rather than that of planists balf his age. allow it to speak freely, got the method found in. Branness orchestral music, instructive contrasts and juxtapositions can effortful; links with the intimate is one of the few conductors be made. On Friday evening at lyricism of Schumann were around with the intelligence, the Festival Hall Lorin Maazel hrought out. Firkusay's right acuteness and accuracy needed and the Philbarmonia Orchestra band is no longer as accurate to produce a completely finished

The temporary reconciliation is

. . . in sound a controversial

Despite the hroad aniformity technique is remarkably modern device, his need to demonstrate

played the First Piano Concerto,
a work which includes the composer's earliest ideas about a
symphony, with the much
revised First Symphony liself.
Rudolf Firkusny was the
soloist. Respected, but hardly
soloist. Respected, but hardly
The Philiparmonia Orchestral
soloist. Respected, but hardly
The Philiparmonia Orchestral
soloist. Respected, but hardly
The Philiparmonia of the produce a completely missed
to produce a completely missed
performance within the evertransfer or powerful as his left, and it
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St. John's. Smith Square

Weinberg and Remedios

by DAVID MURRAY

Saturday, though they per- a T. the good of Schumann's most telling details; but his honest Weinberg is a splendid Remedios' lustily attractive musical instincts were a saving clarinettist, and be was dazzling tenor again, even in perform- grace, and there were meltingin a Caprice by Mozart's ances of uncertain style. Much moments. The fresh infirm-clarinettist friend Anton Stadler. of Schumann's Dichterliebe was ality of bis address to the songs Poulenc'a late Sonata, which be delivered with great panache, drawn out, with a resultant distouches of night-club crooning would have been more striking advantaging of the songs which were not. Later, a group of still with an accompaniment of comparable precision — at the piano Helen Robertson-Barker

Weinberg had commissioned new work from Wilfred osephs, entitled—with extreme imprudence, surely !-- "Piane Piece," with reference to the deliberately low dynamic level of nearly all the music. A piano does participate discreetly in its four movements, hut the virtuoso clarinet dominates: long, tastefully modal lines in the first and third, brilliant high-velocity whisperings in the second and fourth. There is just enough

Anton Weinherg and Ramon the piece over its modest length, sive means are essentially Remedios shared a recital on and it suited Mr. Weinberg to operatic, rather too broad for

very slowly and indulgently was welcome. supplied little more than back-

marvellors postludes of the

1979 BFI Award

The 1979 British Film Institute Award for "the maker the past year" goes to the Yilmaz Güney production group for their film Suru (The Herd) which was shown at the 23rd

really are slow, and a senti-Gounod songs fared more regulations of the whole. The happily, sung with less poise marvellors postlydes of the than easy sincerity. Some tenth, twelfth and last songs thoughtful discipline is need to were so clumsily played as in guida Mr. Remedios into the cause real distress to any lover Lieder repertoire, if that is of the cycle. Remedios' expres- where he wants to go.

of the most original and imagin-ative film introduced at the The BFI film award National Film Theatre during mittee also highly recomoriginality of the new independimagination displayed to sustain London Film Festival.

The film was directed by Zeki Okten and produced The BFI film award com mended Derek Jarman's The example of the imagination and

RUGBY UNION BY PETER ROBBINS

After Twickenham, talent suffices

reality about the whole game. It was as though the atmosphere had been stage managed, a feeling heightened by the evident supremacy of the Weish.

It was important for Wales as a country and the players as individuals to erase the squalid memory of Twickenham. The players succeeded in this, but perhaps the Scots were not the ideal opponents for the occasion. Nevertheless, Wales demonstrated as they could have done at Twickenham that their players can win matches almost at will if they allow their natural talent to come through Wales got off to the best possible start; Fenerick kicked a penalty and Holmes scored a

magnificent try after only nine minutes. That coshloning lead was never really threatened. but surprisingly, those were the with the put-in at four succesonly scores in the first half. Buth sides lost players before

Irvine missed a fairly easy.

and Blyth converted.

Scotland ran bravely from their this unremitting dominance, sluggish in their reactions.

22m line and Renwick finished Squire and Lane were abla Irvine's failure to kick the off an exciting counter-attack either to instigate or to join under the posts for Irvine to

convert. Wales's supremacy began as usual with the forwards. Price will. Martin and Wheel had a difficult time against Gray and Tomes in the middle of the line-out, and Wales wisely opted to throw long, later using the shortened line out with Holmes

running onto the ball. Wales put on the pressure for in his forthright tackling of a long period near half time, Irvine. Each time, Butler delayed the Lianelli. Richards moved to fiyes the overlap would have added an element of surprise. Wales were much more effec-

The match bad been over as strength and expertise at ripevery attack. Lane showed a remarkable turn of speed, and made a huge contribution to Wales's success.

kick accurately. It was interesting that when Richards moved to fly half the Welsb attack had much more thrust, which Fenwick and Morgan exploited to the full. Fenwick had an exemplary game, particularly

The nnly question marks sive scrums on the Scottish line. hang over the qualities of the the interval. Laidlaw, Scot-ball unnecessarily and Scotland finisher but is less creative land's scrum-half, was replaced sauffed nut the hind-side chaltand Clive Rees of London by Lawson, and Davies, the lenge easily. Surely a quick Welsh Eigan Rees gets far too weigh fighalf, by Morgan of pass to the open using Blythe flustered and dropped several language. flustered and dropped several besides the retreating posession, passes, one with the line was the firm way in which beckoning only 20 yards away. Irvine was tackled out of the There were several good game.

WALES DULY beat Scotland penalty in the first-half, and an tive in the mauls where, nace individual performances on the 17-6 before their own prince absolute sitter early in the a forward was beld, the rest Scottish side, notably from and on their saint's day. Enjoy second half, after which Keen clustered round him in sup- Beattie, a most promising Nn. 8, able though the match was, scored an excellent try. The port Wheel and Phillips gave and Renwick and Johnston in there was an odd air of tin-Richards jinked over brilliantly, moving the Scots back and quickly to the Welsb threats Wheel once more showed his and to the possibility of counter attack, as did Irvine. But the a contest well before that, hut ping the ball away. Because of rest of the Scottish team were three goals was a crippling blow but influenced the outcome less than the margin,

Scotland tried a three-man gave an outstanding display of The empathy between Holmes the half-backs were always tight forward play, enabling and Davies was astounding, getting the ball on the retreat.

Wales to wheel the Scottish at although Davies dld not always in the size of the si line-ont with little success, so

Unfortunately, Biggar and Dickson were so committed to the clase work that they were slow to get back and as the game expanded Biggar's lack of pace was clearly exposed. Scotland's only aslvation lay in the counter attack, particularly through Renwick. His part-

canse problems for England in the Calcutta cup.
What stifled Scotland's attack

ner, young Johnston, did many goodthings and these two could

SOCCER BY TREVOR BASLEY

The man who bought Kevin Keegan

England and the most wanted

to the Dell. McMenemy became manager and well run club, who bad However, their relegation at the end of his first year was totally unexpected, and a hitter blow future. to a man whn rightly believed he had the shility to succeed in one of the most demanding and insecure of jobs. In the long term, the setback was prohably salutary, as it has helped to make him generous in victory

and defeat. Six years later, the Saints have

ALTHOUGH Laurie McMcnemy their credit. McMenemy bas dis- approximately £447,000 has persuaded the captain of mantled and rebuilt nn fewer than four teams -- the one he footballer in Europe to settle for inherited; the one which took Southampton — the transfer the FA Cup, but lacked the coup of the season—it would be consistency needed for promowrong if he is remembered as tion; the ona which took the the man who bought Kevin club back into the First Divi-Keegan, rather than as the man sion, but bad insufficient class should also be mentioned they whn brought glory and glamour to do more than survive; and the present operation.

Changes on this scale require in 1974 when Southampton were exceptional activity in the eighth from the top of the First market, as well as bringing on Division and well-placed for local talent. It would constitute their highest-ever rating. They an impresssive record, even for might have been described as a a manager entrusted with an civilised, rather unfashionable open cheque book. But what makes it remarkable is that never won a major honour and. McMenemy was allowed to spend had spent long periods in both only what was available from a the Second and Third Divisions. of only 24,000 and little hope of extension in the immediate

> Unlike many football clubs which are heavily in deht through spending vast aums in attempts to buy success, avoid failure, or improve their playing better than when he Southampton have grounds, adhered to the wise financial principle of spending only what they could afford. Their sensible approach can he seen in of their careers, not only to

other expenses, transfer fees of about £575,000. It means, of course, that their fund-raising activities, including ahout £80,000 from advertising, produce more money than the game itself, while it recouped £300,000 by selling players.

The cluh's intention to remain solvent bas forced McMenemy to huy realistically and to sell well, which is in many respects more difficult. He has an outstanding record, with far more successes than failures. My favourite example would be David Peach, who was hought chaaply from Gillingham and gave Southampton splendid first-team service. McMenemy also has every reason to he satisfied with the £100,000 profit on the Mick Channon deal, Channon's form on Saturday suggested he is

went to Manchester City. McMenemy's special talent has been to persuade so many name players, nearing the end

excluding MacDougall and now Boyer have regularly scored goals.

The latest McMenemy team lies a rather shaky fifth in the table. Judging by their game against West Bromwich, when they were beld to a 1-1 draw in spite of baving most of the possession and exerting nearly all the pressure, they could have problems qualifying for Europe in time for Keegan's arrival, especially as their away record is untidy. With so much experience, their over-employment of the high ball upfield followed by a charge was disappointing and naive.

Many people have been mys-tified at Southampton's ability to satisfy Keegan's financial requirements, particularly as he cannot increase home gates much hecause there is no more

inspired investment will be largely covered by increasing the price of the 16,000 season tickets from £60 for the hest seats to about £90. In addition, a club with players of the calibre League Cup, and have aeveral This is in spite of paying has done a splendid job, both also substantially increase the good performances in Enrope to £365,000 in players' wages, and as player and motivator in their of Keegan, Watson, Channon

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Monday March 3 1980

Budgeting for a recession

THE FOUR important analyses of the UK economy published today are remarkably close in policies, we face a fall of 2 per cent in GDP, with a considerably sharper fall in manufacturing output. Unemployment is likely to rise to about 2m, and inflation, though it is likely to ease from midyear, will remain high both in 1980 and 1981. The only ssible improvement is in the possible improvement is in the balance of payments, and even here only one of the forecasting teams, the OECD Secretariat in Paris, expects any really signifi-cant change. From the rest-the Confederation of British industry, the National Institute. and the London Business School, which is probably closest to Government thinking, the gloom ls almost unrelieved, even in the

Borrowing

If present policies point to such an outlook, one might think that the policies need changing: but only one of the three reports—naturally, that of the National Institute—suggests any traditional budgetary "help" for the economy. The OECD, which offers no Budget advice, nevertheless concludes that the Government has no alternative to pressing on with its present monetary policies, with an appropriate Budget balance. The LBS and the CBI translate this into a broadly neutral Budget. aiming at a public sector horrowing requirement of £10bn or so, assuming that the economy develops as forecast.

to be followed, though in the light spending cuts the PSBR target could be even lower. It is a line of policy which may which depress the balance of appear heartless or defeatist, but payments tend to raise the exit is one which, nevertheless, we change rate, but at least this is would support eoergetically. This is not simply because fiscal expansion" might undermine the Government's central mone-tary policy, but because, assuming that the monetary target is called a borrowing requirement achieved. a fiscal "stimulus" are the more economically

able expansion in recent years. politically The trouble is simply that the

those on both sides of the bargaining table who bave agreed to them, and higher interest

However, the Chancellor also paid too little heed to his own monetary targets in bis first Budget, as Ministers now clearly understand. The Government's contribution to the excessive total demand for credit, for the second successive year, has been a powerful cause of a weak balance of payments—the mir-ror image of national borrowing from overseas—as well as of bigb interest rates.

may well do more to depress the economy that any "stimulus" which causes the rise. First, there is a direct transfer of funds from commerce and industry to savers and financial intermediaries. At the current level of deht to the banks, the rise in MLR from 12 to 17 per cent will have reduced industrial cash flow by some £14bn. Second. there is growing evidence that saving does respond to high rates; the rise in the personal savings ratio to 20 per cent in the final quarter of 1979 no doubt helped to start the present recession.

Exchange rates

Finally, recent market movements in the dollar as well as sterling show that interest rates can bave a powerful effect on exchange rates; and the loss of competitiveness which the OECD This advice seems quite likely puts as high as 40 per cent in three years, is a powerful depressant. It msy seem para-doxical to suggest that policies consistent with the remarkable strength of sterling during two economically disastrous years.

Of course, a Budget contains far more than a single residual might make things worse not significant public sector financial better. -or the more economically It is as well to be clear first of cutting spending, raising why the immediata prospect is charges, selling public sector so depressing. This is not because the Government bas Budget are widely different, set a monetary target which is though they all bave the same proving uncomfortably tight; effect on the PSBR. The per-similar rates of monetary celved fairness of the Budget growth permitted quite reason- has important consequences. and economically. But three of the four reports issued today answer one vital question, Giveo

industry-and to some extent, it the painful difficulty of controlmust be added by the Govero- ling the borrowing requirement, ment itself. Wage increases in the one mistake the Chancellor industries have been is unlikely to make is an excesexcessive, and as the sively fight Budget, however Prime Minister has sharply determined he may be to correct pointed out, the consequence the errors of the past two years.

rates for everyone.

A sharp rise in interest rates has a number of effects which

In lts latest form it bas been perhaps A few countries fear that the

The boundless and rowlinge seas are as common to all people as the ayre, which no prince can prohibite.

Hugo de Groot, known as Grotius, 1583-1645.

Law of the Sea: new regime for oil and oyster

BY DAVID TONGE, DIPLOMATIC CORRESPONDENT

USUAL NAME

INCO Group

U.S. Steel Group

or Deepsea

Management

Incorporated (OML, OMINC)

Ocean Minerals Co. (OMC, OMCO)

Associates (OMA)

in 1958 and 1960.

General Assembly.

claims to the seabed were made

but these conventions were soon

lsw, and numerous Third World

states won their independence, shifting the balance in the UN

The concept of the resources

Law of the Sea. The first session

sharing out of the world's seabed and oceans is being decided. In New York today representa-tives of 150 countries begin a fresh attempt to reach a binding treaty on the subject.

The negotistions deal with two-thirds of the aurface of the earth and involve all its countries, whether coastal or landing back several centuries, that of the freedom of the seas. They will define the rights and duties of every single ship; the powers of countries over

shipping lanes as important as the English Channel or the Straits of Hormuz and Malacca; the allocation of territorial waters and fisheries; and sizes of continental shelves and margins together with nstional rights over them.

They will settle ownersbip over what once was thought to be an Eldorado in the form of nodules of manganese, nickel. copper and cobalt lying on the seabed. Estimates of this potential wealth bave faded of late. But it has given rise to s
"supra-nations!" enterprise to
exploit the seabed on behalf of mankind.

The negotiations are the first instance of the Third World successfully demanding to be counted and of a new world order emerging from consensus rather than conflict. They have involved some remarkable alignments—of, say, Afgbanistan, Austria, Byelorussia, and Chsd in one group and the Soviet Union and the U.S. in another. The principles established

over the past few years are slready being applied in attempts to define a further treaty to cover the Moon and space. Yet to most people the United Nations Conference on the Law of the Sea is a closed

tragging on for six years. Today the omens are better than ever before. Agreement bas been reached on nine-tenths of the issues and on a timetable to end what has become the world's longest diplomatic maratbon. The aim is that after five weeks in New York and a further five, starting on July 28, be complete; this treaty would then be signed next year.

present negotiating text of 304 articles and seven annexes, containing a further 102 articles, could finish up in shreds. But the general expectation is that a treaty could be signed, though in 1982 rather than in 1981. The contrast between the scale of the issues involved and

HE LARGEST act of the negotiations results from dividing up this planet several factors—the inherent is nearing its end: the complexity of the problems, the complexity of the problems, the suffocating terminology to which Governments and officials bave resorted, and the achizophrenia of many of the actors.

Britain, for instance, has to balance its desire for the maximum freedom for its shipping its besches and therefore baving power over polluters. It also needs to balance the need locked. They have seen the It also needs to balance the need re-definition of s principle dat- for secure mineral sneplies next century sgainst a desire for good relations with the Third World now. Oil companies want the maximum freedom to transport oil, but also want the largest extension possible of national control over the seabed. They prefer to deal with separate governments rather than a seabed anthority with a

> Each Government thus finds itself borse-trading, and pre-fers to avoid the glare of pub-licity. Britain, for instance, bas identical interests with Argentina when it comes to seeking rights over a wide con-tinental shelf. But when it comes to control of the new institutions Britain's interest lies with the developed North and those of Argentina with the developing Sonth.

Routes and resources

The bistory of the freedom of navigation on the high sess is a chequered one. On the strength of a paper sward in 1494 the Portuguese and Spaniarda presumed to divide the world's seas between each other. Queen Elizabeth I of England in 1580 Insisted on the freedom of the seas. Grotius, founder of international law, buttressed her arguments. By the end of the 17th century the distinction between high seas and territorial waters was, established. As British naval power grew, it was the Americans who became the champions of the freedom of nsvi-gation on the high seas. Increasingly, interest in the

resources of the sea elbowed its way alongside concern over routes on the sea's surface. In the 18th century fishing rights off North America were the subject of bitter conflict between European powers. The pearl beds off Ceylon, Venezuela and the Gulf have attracted the covetous for centuries. Then, in 1873, the first mineral nodules were found and a few years later, from piers, the first offsbore oilwall was sunk

The seabed had also become a route for submarine cables. A cable convention was held and later a League of Nations conthe small general awareness of ference dealt with the width of

MATTERS

territorial waters. It ended in the seas from pollution and on disarray on the subject. Actual rules to cover marine scientific research and the catching of hy Britain and Venezuels in 1942 and the U.S. in 1945. About fish, crustaceans and other living resources.

Also active are the French group, of state and private companies, and the Japanese group, Deep Ocean Minerals Association, also of state and private companies.

THE MAIN SEABED CONSORTIA

Kennecott Copper, RTZ, Consolidated Goldfields, BP,

Noranda Mines, Mitsubishi

International Nickel, Sedco,

Lockheed Missiles and Space, Billiton (Royal-Dutch Shell)

three W. German and 23 Japanese companies

Standard Oil of Indiana

U.S. Steel, United Miniere

and two others

PARTNERS

this tims the Latin American States which are land-locked states began to claim up to 200-mile territorial waters. Western or have sbort coast lines will bave some rights to surplus fish in the seas of adjoining coun-tries. The special rights of "archipelagic states" (meaning states consisting of groups of anxiety about this contributed to the staging of two UN con-ferences on the Law of the Sea, Four UN conventions resulted concept of exclusive economic from the conference of 1958, zones bas been adopted. They overtaken. There were delays in their ratification, the Soviet Union began to emerge ss a world maritima power, tech-oology began far to outstrip the over natural resources and economic activities.

Inevitably, what divides the 2,500 delegates at each session attracts more attention than what they have already agreed. main issues ontstanding fall into three main estegories: rights to the continental shelf, egal issues, and-most difficult

of the sea as common property began to gain ground. First put forward by Roman thinkers Gaius and Justinisn, the concept -hard minerals. wss endorsed hy President Lyndon Johnson in 1966 when The problem of the continental shelf and the related issue of oceanic ridges is par-ticularly important to Britain. be said the U.S. must ensure that "the deep seas and ocean bottoms are, and remain, the legacy of all human beings." What is decided will govern what bappens to the Western Approaches west of Cornwall, which could contain the next The present formulation of this idea and the most important generation's oil. The present proposal is that countries withconcept to be accepted, was put forward one year later by Mr. Arvid Pardo the Maltese Ambasout a proper continental shelf should be deemed to have one sador to the UN who declared "common heritage of mankind." coast and that those with extensive shelves should be given the Third Conference on the Law of the Sea. The first session

1974. It has since worked by consensus rather than using the normal UN voting procedures. A draft negotiating text wss between 20 prepared in 1977 and revised the coast.

Britain 6 between 200 and 350 miles from

Agreement bas been reached allows it to achieve its objectives. on navigational issues. Terri-torial seas should be of 12 miles' water plateau in the Atlantic, width and all ships should have even if the Danes and tha Irish the right of "transit passage" may he thinking the same, through straits. Agreement bss More controversial is the issue been reached on how to protect of defining ocean ridges in the

200-350 mile area: this has implications for the movement of military ships, the implantation of surveillance devices on the ocean floor and anti-submarine

Exploration in 1974, test mining

Exploration, collector testing

and pilot processing, especially in 1975-7

There are arguments over bow disputes should be settled, especially those concerning delimiting the seabed. There are problems over the final clauses on amending, revising or expressing reservations to the Conventien. There is also the fuss that EEC members are are areas extsuding 200 miles making shout having the EEC from the coast within which as a party to the Convention states have sovereign rights and the equal fuss that the U.S. is making over not baving tha Palestine Liberation Organisation as a party.

But the main problems relate to bandling the millions of tons of nodules. These are crumbly black minerals like burnt potatoes which lie on the seabed at depths of 10-15,000 feet, particularly between Mexico and Hawaii. Hopes have been pinned on them as intense as a child'a fantasies of pirate treasure. But now expectations are more prosaic.

Spending on research

which it also begins to become a third is that the package does practical to consider mining contain something for every-nickel from the large laterite deposits in Australia, and Indonesia, New Caledonia, and the common interests of manthe Philippines. Thirdly, the kind to which the Brandt Commining companies have their mission on the survival of the reservations about the arrange-world made reference. It is reservations about the arrange world made reference. It is ments of the proposed Interbard not to conclude that the national Seabed Authority and Law of the Sea is virtually upon its production

Enterprise.

Ten years ago various consortis were spending heavily on seabed mining research. Now the pace has fallen. "In total sli of us invested some \$200m. but no one is doing much at present," one consortium says. Yet most countries see the seabed regime as the crucial probbed regime as the crucial prob-lem. The key issue is whether the U.S. and its allies should have the power to block deci-sions of the Council of the ISA. The developing countries are determined to prevent the emergence of any arrangement similar to that in the UN security Council where certain individual countries bave a velo. The U.S. says it will only sign if this issue is satisfactorily resolved.

The Authority is to be a unique body, regulating production and marketing and having an industrial arm, the Enterprise which will purchase mining and processing technology from developed states and their mining companies. The industrisl states are to contribute financially to it, with Britain's own contribution being several hundred million dollars. A host of detail remains to be finalised on mstters such as the financing and taxation of mining and the transfer of technology, but the proposals prepared last year by Mr. Tommy Kob of Singapore "bave brought us much nearer a solution," according to one EEC country.

The mining companies have little good to say of the Conference on the Law of the Sea. In the U.S. their pressures on the U.S. negotisting team is so intense as to cast doubt on the arguments of some mining companies that the economics are questionable. But in Britain companies express fears that if the conference should now fail a moratorium would be imposed which would deprive consortia of access to the seabed. The oil companies are more content, one saying: "If it were not for the Law of the Sea, it would be the law of the jungle."

This sentiment is a part of one of the strongest forces pushing the conference towards success in value, the most valuable product is expected to be nickel but forecasts for demand are not what the product is expected to be likely. A second factor is the product is expected to be not uneasy and conflicts more demand are not what the product is the product is expected to be not uneasy and conflicts more demand are not what the product is the product in the product is expected to be more uneasy and conflicts more product in the product is expected to be more uneasy and conflicts more product in the product is expected to be more uneasy and conflicts more product in the product is expected to be more uneasy and conflicts more product in the product is expected to be more uneasy and conflicts more product in the product is expected to be more uneasy and conflicts more product in the product is the product in the product in the product in the product is the product in the prod nickel but forecasts for likely. A second factor is what demand are not what they used one participant describes as to be in the heady early 1970s; "the psychological interest lu Secondly, for seabed mining to success" of negotiators who be worthwhile, the price of have devoted a decade of their nickel has to rise to levels st life to this single process. And as. Soon there may be little option but to obey.

Pretoria under pressure

THE RING is tightening of the Transkei. But there is Rhadesia is well on the way to no modification of the hasic joining Angols and Mozambique concept. Now even those who under black majority rule. The expectations of blacks in South Africa are rising, as is the For urbsn blacks the Riekert realisation by the authorities Commission on labour mobility that apartheid must try to move and Wiebahn Commission on with the tiones. But it is one of black labour rights have given the potentially pyrrhic successes of apartheid that the races are the practical results of their new so sepsrated that virtually no channels of communications

Explosive

The dangers of this situation are highlighted by the findings of the Cillie Commission into black ghetto of Soweto in 1976, lasted eight months and cost at least 573 lives. The Commission warns that Sowero ia as potentially explosive now as it was four years ago and blames the entire structure of apartheid as a major factor contributing to this.
It is against the conservative

background of the Commission that one has to see some of its other striking points—that despite three-quarters of the deaths being caused by police gun fire no policeman was known to be criminally liable; that no senior members of the administration are criticised even though clesr warnings of irouble existed and alternative methods of riot control could have been tried; and that there were no official responsibilities for the apparent allowing of and to stress the threats posed attacks by migrant workers on hlacks in Capetown.

But the Commission's accept-ance that apartheid itself must lation of states" so dependent carry much of the blame is on Pretoria that they cannot crucial. Worry about the system has long been aired by industrialists who find it economic but in the last resort ally inefficient. The military too are worried, wishing to have the domestic front quiet at a time

homelands of which up to 10 are potential for danger. The Cillie his insignia may be displayed— are not coming," says Leonard. exceedingly valuable. "It must in company, the super-observant But not because they would be the most important stamp in

hould be expected to support the system are fighting shy. an impression of change. But

recommendations have been few, with the main novelty being that the government of Mr. P. W. Botha bss replaced a few legal obstructions by other more subtle ones-a move in line with his general tendency to make administrative rather than political changes. His visit to Soweto and talk of amending the marriage laws received publicity, but achieved

At timea the 2m Coloureds have struck the 4m white as potential allies sgainst the 20m blacks, but here too the Government bas found that attempts to woo the leaders of the Colonreds are failing. The Cillie Commission finds that Coloured of the Western Cape has "joined the black community to remove his grievances and gain rights through joint struggle." Mr. Botha thus has few bridges with the blacks on which the build.

Threats

There is an increasing tendeucy to retreat into the laager by the country's Marxist neighbours. In the past there has afford to cause it trouble. In Pretoria's feared nuclear capability, its conventional troops, when the external one seems increasingly disturbing.

The record of change is not good. For rural blacks, there has been some talk of giving more land to the Bantustans, the more land to the Bantustans, the ribal - based "independent" Yet Southern Africa retains its

Apocalypse soon warns Wynne

Readers reduced to the verge of despair by the weekend's welter of unhappy economic forecasts should save their tesrs and brace themselves for worse to come. Wynne Godley, the gloomsters' guru in charge of the Cambridge Department of Applied Economics, is about to bring forth another of his doomladen documents on the promoment he ia saddling up his faithful spocalyptic charger and preparing to descend on the nation bearing tidings, I am

told, of " irreversible decline."
While Godley's uncomfortable vision of our future is familiar to students of the economy who bave followed the man through his ten-year tenure at Cambridge, my informant with an ear to the wall warns that the next set of forecasts-due out after the Budget-is the most blood-curdling he bas yet seen.

"He bas gone through the ozone layer this time." be says.

Godley himself, who foreswore going into "the forecasting business" when he left the opportunity ones to miss an opportunity of demonstrate Treasury for the realms of academec, was gentlemanly apologetic, but not to be drawn into giving me a preview of any of bis forthcoming pearls. With an experienced self-publicist's eye on future headlines, be tells me: "I don't want to scoop myself."

Dutch treat

Observant readers may have noticed a new sign in the window of the exclusive tailors George Watson and Son just across the rosd from the Bank of England. It is the Royal Warrant of Prince Bernhardt of the Netherlands (no mean husinessman himsalf) (no mean businessman himself), who has been shopping there for the past four years or so and is evidently so pleased with the service that be has agreed that



to me

will note, with that of the King of Afghanistan, whoever he may

Not usually ones to miss an

opportunity to demonstrate their superiority in international sporting encounters, the Russians are displaying uncharacteristic reticence in refusing to allow their leading chess players to come to London next month for a chanca of glory (and £10,000 in prizes) in Britain's richest-ever chess tournament. Or perhaps ideo-logical fastidiousness bas some-thing to do with it: after all, the event is being sponsored from

Partner and chess fiend Frank Leonard tells me that the Soviet masters Karpov and Romanishin gladly accepted a would bave to stay at home. No explanations, of course.

In a way I am johly glad they

probably bave taken the lion's the world," laments Carr-Gomm. sbare of the booty. "They "We keep looking in the family would have caused terrible archives for more, but none has security problems and bad they come we would not have heen able to play Viktor Korchnoi.
Defector Korchnoi, who is said to be the world's second best plsyer, is atill unlikely to have it all his own way. Leonard bas lined up a respectable set of international combatants includ-ing Britain's latest find, 14-year-old Nigel Short.

Missed fortune

old soldiars eventually fade away, but some take an unconscionably long time about it. Consider, for example, Field Marshal Sir William Gomm, whose chestful of medals and regalia comes under the Sotheby hammer on Wednesday. He beld a commission in the army for 81 years, starting as a 10-year-old ensign in 1794 and ending up in the Tower of London (running the place, I basten to add) by the time of

He saw action in most of the campaigns against Napolean, during which he appears to bave spent much of his time on foot trying to replace the several borses shot from under him. It was at Wsterloo, his great great nephew Richard Carr-Gomm, tells me, that the old campaigner received the Russian Order of St Anne.

The Czar's indulgence is included in the sale, which is expected to raise £25,000 for the family finances. The medals, close to the very source of Carr-Gomm says, have been on capitalisim by stockbrokers display in the Army Museum.

Now they have to be sold Carr-Gomm says, have been on Now they have to be sold "because we need the money." And he sighs over the fortune from the beach. that might have been. During Romanishin sladly accepted a spell in musti when Sir invitations to his firm's Kings William was governor of Tournament only to be told by Mauritins, his wife inadvertently their senior comrades that they put into circulation the would have to share there. Mauritian postage stamp which has now become a myth in its own right and accordingly

turned up yet."

spy

The funkey who answers the door at No. 10 on Thursday evening had hetter keep his wits about him if Mrs. Thatcher's "celebration of enterprise" is not to be invaded by pinstriped gate-crashers. The soirce as I revealed last week, has been laid on to permit the PM to administer a pat on the back and a few gins, no doubt, to the rising stars of British industry and business.

Since I wrote the said piece I have received several calls from stockbrokers keen for ohvious reasons to discover the identity of the other 50-odd celebrants I could only suggest, however, that the inquirers should spply the "door-stepping" techniques popular among journalists.

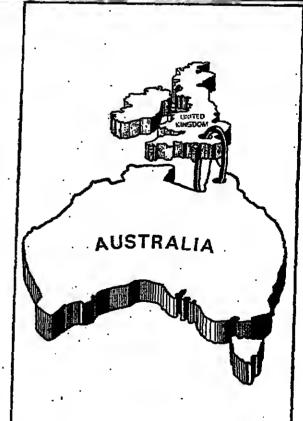
But one entrepreneurial broker offered me a bargain. dublous enough, I feel to be worth recording. "Fil tell you wbat," my consiparator offered.
"If we were to log all the car numbers as they arrive, perbaps you could use your journalistic contacts to run them through the police computer and we could trace them like that. It should he worth about 50p a number, I'd say." Things in the City must be far worse than ever I dreamed.

Far fetched

My thanks to David Skipner of Osakaya Securities for his report of a telephone conversation with Kypros Holidays which adver-tises a villa in Corfu "350 years "Do I get a reduction for a

long stay?"
"I'm afraid not, sir. How long do you intend to stay?"
"Not sure, it sll depends on how many times I go to the

Observer



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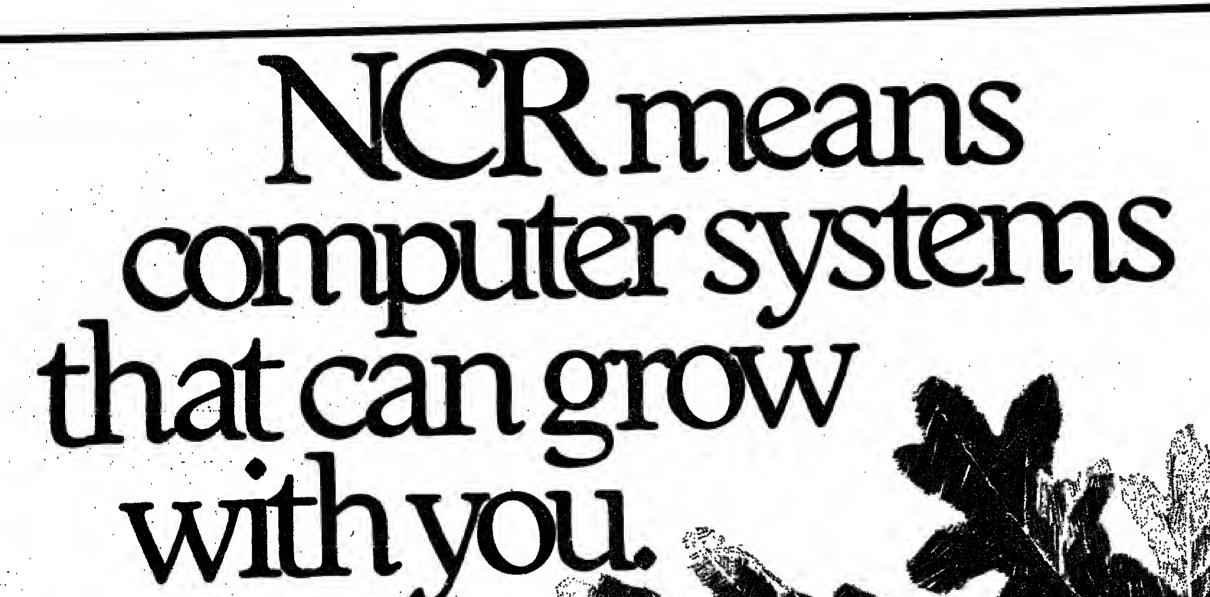
FINANCIAL TIMES SURVEY

Monday March 3 1980

THE COMPUTER INDUSTRY

Advances in micro-electronic technology and a dramatic fall in hardware costs are bringing computers within reach of an increasing number of users. Computer power is also being used in many new applications, but the competition to supply this expanding market is growing ever more fierce.

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Business applications increase as costs fall

BY GUY DE JONQUIERES

has been widely quoted sioce, a senior executive of a U.S. micro-electronics company com-pared the rule of semi-conduc-to most people was a large and tor techoology in the electronics comhersome machine which sat industry of ionorrow — and himmung in splendid isolation by extension in the in in a glass cubicle, teoded dustriaised economy as a whole solicitously by a reverent staff -to that played by crude oil of technicians.

It is an appealing comparison, all the more so to an American frustrated and hewildered by the degree of U.S. dependence on foreign oil exporters. For it encompasses not only the pervasive im-portance of micro-electronics in almost every area of expanding economic activity, but also the strategic power accruing to those who have acquired a significant lead in its developcoonnercial exploitation.

The analogy is, however, inexact in two ways. For while the supply of ail is finite the supply of silcon chips, whose chief material ingredient is sand, is for all practical pur-poses limitless. Secondly, while international oil prices have remote central computer, has shot up since 1973, the cost of emi-conductors has been fall- down to the branch office level. ng every year at a very much faster rate.

The decline has been so dramatic that it is worth quoung specifies: the cost, for example, of components needed to provide one megabyte (that the equivalent of 1m eighttheir characters; of a com-puter's main memory. In 1974, or more before the necessary it was about \$32,000. Three technology is available for more years later it had fallen to third or less of that and, hy 1984, it has been confidently predicted, it will fall to around

Compaoy

Eurroughs

Honeywell

Control Data

Sperry Rand

expectations only 10 or 15 years himmung in splendid isolation solicitously by a reverent staff

Such machines still exist, of course, operating under the watchful eye of corporate dataprocessing departments. But the lauoching earlier this year oy Sinclair of a £100 home computer, coming on the heels of the commercial success of persooal nucro-computers selling in the £400 to £1,000 range. shows just how far we have

Wider acceptance

In between these two extremes, the computer has made great strides in gaining wider acceptance in husiness. The growth of distributed data-processing, which allows users to execute operations locally

Coorputers have also heeo demystified by developments in software, particularly in simpli-fied languages which enable even uoskilled staff to operate them. The next logical step will he to make them respond to, and reply in natural speech; technology is available for more llian very limited applications. While the market for conventional data-processing has been steadily growing, the computer industry's frontiers are also being progressively oushed out-

Per cent

+ 20.6

十 39

+ 29.3

+ 21.I

+ 21

+ 29

235

75.9

This steady slide in costs has wards to embrace ever larger been largely responsible for a areas of territory. This expan-

Total

2,831

4.210

3,003

4,586

1,373

'Estimated at exchange rate of £1=\$2.20.

HOW MAJOR COMPUTER COMPANIES

PERFORMED IN 1979

on 1978

+ 15.1

_+ 2I

+ 18.7

+ 15

+ 23

+ 12.8

which has exceeded by far main routes which, as will be tation. seeo, ultimately converge.

First, the coming of age of computer power can now be used liberally in a variety of applications to perform funccarried out by mechanical or electro-mechanical means.

Increasingly, micro-processors are being incorporated into applications industrial to monitor and control mass protheir way into household products, in white goods like washing machines, in heating systems and kitchen appliances, as well as in consumer electronics like hi-fi and televisioo games. In motor cars, they are being used

IN A REMARK last year that growth of the computer market sion is proceeding along two trol and dashboard instrument in place producing substantial improve- phone lines for the transmission expense and the changes in

their application is virtually placed by one of more modern micro-processors means that unlimited Indeed, in the words of Mr. Floyd Kvamme, a secior tions which have hitherto heen uses springs, levers, stepping motors or gears is perforoning logic and that product should be built out of semicooductors."

It should be added, bowever, duction lines, machine tools, just ripping out one piece of matique." To date mechaoical handling and quality equipment and plugging in factory equivalent control. They are also finding another. They are complicated devised in Britain. to programme and the consider-able expense of doing so can be different routes is wellvery costly object.

in fuel systems, ignition con- can simply be fitted on to a piece to control switching operations,

of a mechanical control. Often, ments in speed, reliability and Theoretically, the scope for the whole machine must be redesign.

executive of National Semi-computer iodustry is following electro-mechanical predecessors, conductor: "Any product that leads towards a much closer such as automatic queuing identification with both tele-communications and office equipment. This "marriage" of different technologies has been celebrated in the U.S. by the that the switchover to micro- coining of the word "compunic-processors involves more than ations" and in France of "telematique." To date, no satisequivalent bas been

recouped only over large pro-duction volumes: the custom-made micro-processor remains a employ large numbers of micro-Moreover, it is rare that if signals into digital pulses and

The new generation of ex-changes also offer a much wider The second path which the range of facilities than their such as automatic queuing services, messages and call referral. These functions are not only convenient in them-selves but will play an important role in future all-electronic business information and communicatioo systems.

Complex network

Such a system would link together facilities for voice and text communications, word and data-processiog, copiers, and electronic data storage in a complex oetwork under the overall supervisioo of one or more comof speech and data, it could also administrative and working use satellites to hook up partici- patterns required to make full pants in different centres in a tele-conference."

Computer technology is vital here, not only because it will provide much of the equipment needed, hnt also because of the contribution which it can make in devising "interfaces" which development points towards it will ensure that different hut also by basic commercial. machines can communicate with each other in a common language. This latter require-ment is already one of the most rapidly expanding areas of the

software business. Admittedly, the market for such large system will probably be confined at first to a relatively small number of very large corporations which are already organised on a widely dispersed global scale. For the

prove a deterrent though the could be introduced bit by bit. on a modular basis

Computer companies being drawn into this area mat only because their technological considerations, Arthur D. Little, the American consulting compaoy, which takes a somewhat less sanguine view than other observers of the outlook for the computer industry, recently suggested that its future rate. of growth would depend signifi-cantly on its ability to diversify into byhrid technologies. If that is so, we had sooo better find a more felicitous term than

Hard lessons for the entrepreneurs

PLUG COMPATIBLE

of tloy seedlings, flower into exotic profusioo and theo wilt overnight—all within the space of about five years. And only, perhaps, io the fertile comoier-

cial soil of the United States. That is what happened with a band of adventurous entre- attached. The man credited prencurs who found a way of with baviog the idea first was prencurs who found a way snatching business from under Geoe Amdahl, until 12/0 the oose of IBM and then paid tor of IBM's Advanced Computing Systems Laboratory. patible mainframe manufac-turers (PCMMs), they specialise

rich source of revenue for the company, even after it has delivered the equipment. Cusance and software support. Moreover, once they have invested beavily in a system they are unlikely to coosider lightly switching to another make, with the expense and upheavals that that would eotall.

But IBM's customer hase is

ONLY IN the super-heated such as disc drives and memory climate of the computer world noits which were compatible could a multi-million dollar with IBM computers but with iodustry sprout from a baodful embodied features not available from IBM itself.

It was not uotil the early 1970s, however, that acycce seriously thought of going further and competing directly with the mainframe computers to which the peripherals were

Greater power

in making machines designed to Amdahl left IBM largely combined sales were estimated "plug in" to IBM installations. because of management's refusal to be equal to about 5 per cent IBM's customer base, roughly to cootione with his project for of IBM mainframe shipments two thirds of all general- a very large computer. So he a remarkably high proportion in purpose mainframe computers decided to go ahead on his own, such a short period. installed worldwide, remains a settiog up Amdahl Corporation

At first, IBM struck back with a team of former col-leagues from IBM. Thanks partly to a capital injection from tomers need service, mainten. Fujitsu of Japan, the company was able to complete the design work and delivered its first computer to an IBM client in 1975. A year later it was suffiwell established to go

But IBM's customer hase is modern architecture using more also a huge market for any advanced electronic components, rivals able to crack it. The first Amdabl computers delivered raids on it were carried out between 1.2 and three times about 15 years ago hy companies more power than the equivalent

MANUFACTURERS GUY DE JONQUIERES

they did so at lower cost. delivery the ranks of the PCMMs companies. By early 1979 their

rather lazily, cutting the prices in droves to buy the new of two of its most widely-copied machines by 30 per cent but without changing their technical without changing their technical the first weeks after the features. Then it introduced a aunouncement. The PCMMs, powerful new model, the 3033, which offered twice as much performance per dellar and street, saw their stack performance per dollar as the nearest machine in its range. IBM also took to writing more of its computers' instructions in "microcode" wired ioto the machines, making them harder

to copy. The PCMMs managed to cope striving to put them on a stable with these tactics. But the hold-footing.

ness of IBM's next countermove. Amdahl's success was too just over a year ago, caught striking not to attract imitators them almost entirely hy surof its own, and within less that prise. In effect, it changed the three years after its first rules of the game by launching a new series of computers, the had swollen to about a dozen 4300 range, at drastically reduced prices which made possible price-performance ratios between four and seveo times better than aoything it had offered previously.

This feat set the computer At first, IBM struck back world alight. Customers flocked machines, placing orders worth several hillion dollars within plummet and their profits with

> husiness altogether and sold fts computer activities to National Semiconductor, which is now

But the hlow to the PCMM in-dustry, though beavy, was not fatal. It soon became apparent competitive. But their ability to survive probably will depend on; that IBM's daring marketing three main factors: tactics had stimulated a huge In the short term, the speed demand which, because of tech with which IBM is able to: nical and production problems, deliver its new machines. it was unable to satisfy. A number of new customers, who sue as radical a shift in price-2 had delayed acquiring new computers in anticipation of the 4300 launch, were unable to the market, probably during these wait any longer; they turned to next year or so. Having itself a the PCMMs to fill the gap.

Much more serious was the decision by large numbers of it could choose to tread more fearing further softly in the future. customers leasing a computer pays the full from services, maintenance and purchase price only over three leases, years in most cases, manufacrunning for only two years.

Key factors

ways. Some met it head on by ltel, a fast-growing leasing medium sized models which, concern, was forced out of the they claim match or currently husiness althoughter and the size of the concern. price-performance ratio of the 4300 series. Others have thrown in the towel and have

• Whether IBM intends to purperformance ratios when its next brings new computers to

aggressive price cuts and new . The size and loyalty of the model launches by IBM to turn customer hase which the to leasing for outright pur- PCMMs have already huilt up chases. Because a customer and which will provide revenoes

been somewhat scarred by the

aftermath of the 4300 launch.

The outcome may provide an turers' revenues suffer hadly, interesting case study for Furthermore, many users opted students of competition theory. The PCMMs showed that IBM's market strength could be defied hy a small group of impudent newcomers who, hy their The PCMMs have responded to the challenge in different better equipment to its users.

showed that it still has the power to make life very difficult for those who intrude on its market. That is a lesson which is likely to he studied closely by anyone who considers taking on withdrawn to areas of the mar-the industry leader head-on in ket, such as that for very large the future.

SABOUTTIM WE LEARNED HOW TO LISTEN.

There's a problem in this country that has cost British industry millions of pounds in losses.

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IBM's introduction of aggressively-priced, medium-siz ed computers, such as the 4341 processor (left) sent shock-waves through the industry last year. More recently, IBM has announced its 5280 distributed data system (centre); an audio-typing unit (right) produces synthetic speech with an unlimited vocabulary when at tached to an IBM magnetic media typewriter

Big changes in prices and products

of a small sovereign state.

in size with those of some Euro- announcement of two aggrespean governments. And despite sively-priced efforts by both its commercial computers, the competitors and the U.S. Justice Department to trim it down to through the industry. Embody-size, it still accounts for a ing the most advanced microstaggering 65 per cent of electronic technology and general-purpose computers in stalled worldwide.

staggering 65 per cent of electronic technology and priced to sell for as little as \$65,000 in their simplest form.

By wirtue of its power and they offered between four and secrecy, the company invites a seven times more power per kind of scrutiny and theorising dollar than the 370-series kind of scrutiny and theorising dollar than the 370-series not dissimilar from that found models they were intended to among Western observers of replace. the Kremlin. Its every move is poured over and analysed for pointers to its future market

speaking. IBM-Broadly watchers fall into two categories. There are those who maintain that the company is now so big and bas so much .marketing moscle that it is effectively able to determine the major trends in the international computer in-IBM becomes the world stand-ard, to which all other com-

those who argue that IBM's mainframe manufacturers sheer size had bred a complacency which has dulled its most of which were founded technological edge and coming the early 1970s, bad carved mercial instinct. In their view out a flourisbing business by

IMB BEGS superlatives. With against multiple attacks by technically much more modern, gross revenues running at about smaller and more agile com- Within a few years, PCMM's \$23hn a year and a staff of petitors and, will bave to had captured about 2 per cent more than \$25,000, it commands surrender increasing segments of IBM's customer base and resources comparable to those of its market share.

of a small sovereign state.

IBM's recent behaviour lBM's research budget, totalling well over \$1hn a year, ranks theories of both schools. Its medium-sized computers, the 4331 and 4341, early last year sent shockwaves

Sharp break

The new machines repre-sented the sharpest break yet with IBM's previous tradition of pricing its computers according to the amount of performance which they offered. They were also designed to be simpler to operate, more reliable and easier to service dustry. They believe that it is and maintain than existing models.

The immediate impact of the

The 4300 launch forced the PCMMs to slash their prices dramatically to remain competitive and put the survival of several of them in jeopardy. It also caused anxiety among manufacturers of mini-computers who bad been steadily encroaching oo the mediumsized mainframe market, offering ever more powerful machines. Armed with the 4300, IBM became well-placed to repel their advance,

Before long, bowever, it was beginning to look as though IBM's bold move might have rebounded. Its customers, while clamouring for the 4300, also took fright. Fearing that its introduction beralded a series of aggressive new model of aggressive new model launches which would make obsolete their existing equip-ment, they moved in large numbers from outright purchases of machines to shortterm leases. Their reaction produced a dent in IBM's

IBM, in the meantime, was and, to which all other companies must conform—or risk being driven out of business.

On the other hand, there are those who argue that IBM's sheer size had bred a companies must companies must conform—or risk being driven out of business.

The immediate impact of the IBM, in the meantime, was announcement was to sow having difficulty keeping up to so, and particularly among orders for the 4300 series. It those who argue that IBM's mainframe manufacturers was unable to produce in sheer size had bred a companies, sufficient quantities the highlyadvanced 64K random access memory (RAM) chips, capable of storing 64,000 hits of information, which it had developed

IBM DEVELOPMENTS

GUY DE JONQUIERES

this purchase, at a time when chip supplies worldwide were already tight, was about \$90m.
The immense development

costs and capital expenditures required for the 4300 and other new models in IBM's range also took their toll. In the space of about two years, it moved from a cash surplus of almost \$5bm to become a heavy horrower. Last summer, it raised \$1.5bm from its banks. Then, in the autumn, it went to the bond market to raise a further \$1bn-its first public debt issue for 12 years. Soon afterwards, it horrowed an addi-

tional \$300m from lenders in Saudi Arabia. The year also saw a succession of abrupt shifts in the company's pricing policy. After cutting the prices of products that were either due to be replaced by or directly competed with the 4300 series in February, it raised its leasing and software prices for a number of its machines at the

This move failed, bowever, to reverse the customer stampede the "great grey giant," as the company is known in the industry, will be unable in the long run to defend itself frames, but which were was forced to place orders on in November. Then, at the end the H-series computers, notably the 370, was early next. Initially, the high

the open market for an esti- of the year, IBM announced its mated 18m 16K chips—which most wide-ranging lease and purit fitted into the machines in chase price increases ever, spangroups of four. The cost of ning almost its entire model fine. These increases, which initially took effect in the U.S., had sperad to Europe hy early

> All these unheavals were re flected in the company's financial results. Despite a strengthening of its performance during the final quarter, its profits for the year as a whole were 3.2 per cent down on 1978—the first annual decline recorded since 1951, All in all, to borrow the description of the computer analyst at stockbrokers Wood MacKenzie, 1979 was "a year IBM will want to forget."

Aggressive stance

No doubt IBM, its customers and its competitors are united in hoping that 1980 will prove a somewbat less tumultuous year But it seems unlikely that it will be an altogether calm ooe. IBM's coup de theatre with the 4300 launch was almost certainly not an isolated event: the company is widely thought to be moving towards a more aggressive mar-keting stance ond is known to several interesting new

ful machines, capable of per-forming around 10m instruc-tions per second. But it is not The major battle ground has yet known whether they will offer as radical an advance in

There are reasons why the company might opt for a slightly more cautious approach, in the immediate future at least. Not only bas the 4300 made IBM customers distinctly nervous about the company's next moves: they have also been complaining some time about the increasingly bitter competition be-tween different IBM divisions for the same markets, which has led to companies being sub-jected to raids by warring bands of salesmen.

The source of these complaints can be traced back to 1974-75. when IBM decided to split its production and marketing activi-ties into two. Its main purpose was to improve its penetration of the lower end of the market. where smaller competitors were making deep inroads. Previously, the company had been deterred from putting too much emphasis behind cheaper machines which would attract new customers, for fear that its existing customer base would also decide to trade down.

Uoder the re-organisation, responsibility for marketing smaller products was entrusted to General Systems Division (GSD), part of the Atlanta-hased General Business Group, which also embraced the Office Products Division (OPD). Responsibility for IBM's large mainframe

are expected to be very power- given to the Data Processing

The major battle ground has been the lucrative and fast growing distributed processing marterms of price/performance ket. Here the two divisions have ratio as did the 4800 series. expounded unite different philthe virtues of linked small com-puters, while DPD has emphasised the virtues of networks of terminals grouped around a central "host" processor. While the latter has aimed its sales pitch at corporate data-processing departments, the former has sought business from customers in other parts of the same companies.

Internal rivalry

The growth of the word-promarkets has fuelled the internal rivalry. Previously, these were served by OPD. But DPD has been reluctant to see business going to a sister organisation of and has begun offering a it is likely to result in the split-number of products of its own in these fields. its arch-competitor in Atlanta

Quite separately, IBM has been strengthening its presence in the communications field as a step towards providing a full range of services for the office of the foture. It is a 42.5 per ceot partner, alongside Consat and Aeina Casualty, in Satellite Business Systems (SBS), which is planning to provide companies with switched line networks for from the trial intact: certainly, the switched line networks for from the trial intact: certainly, the switched line networks for from the trial intact: certainly, the switched line networks for from the trial intact: certainly, the switched line networks for from the trial intact: certainly, the switched line networks for from the trial intact: certainly, the switched line networks for from the trial intact: certainly, the switched line networks for from the trial intact: certainly, the switched line networks for from the trial intact: certainly, the switched line networks for from the trial intact: certainly, the switched line networks for from the trial intact: certainly, the switched line networks for from the trial intact: certainly, the switched line networks for from the trial intact: certainly, the switched line networks for from the trial intact: certainly, the switched line networks for from the trial intact in the switched line networks for from the trial intact in the switched line networks for from the trial intact in the switched line networks for from the trial intact in the switched line networks for from the trial intact in the switched line networks for from the switched integrated voice, data and image transmission.

vices it offers—ground stations needed to receive and transmit information will cost about \$250,000 each—will limit it to very large corporations. But, in due course, ways may be found to expand the service to smaller customers.

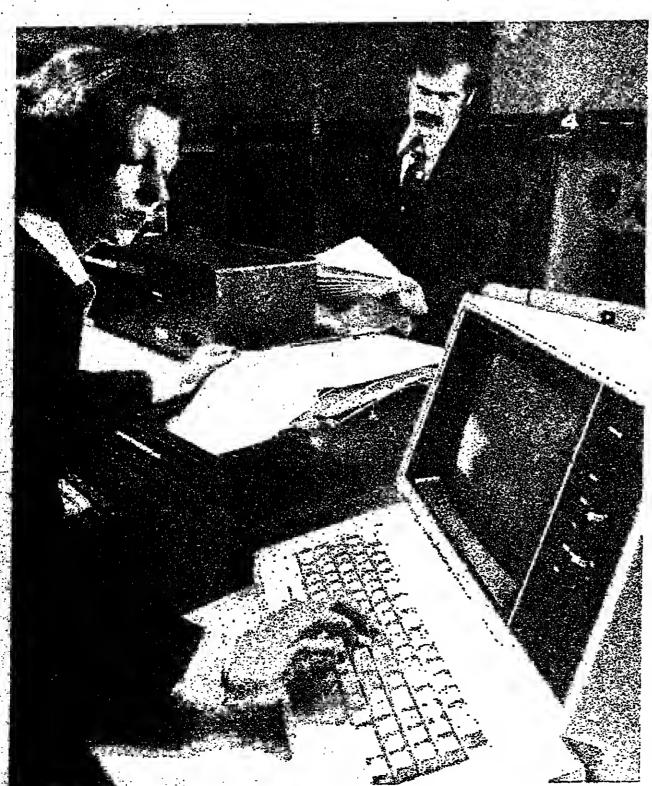
IBM already spans almost the entire range of products that will be required for the office of the future, the only significant exception being facsimile machines. Potentially. its involvement in SBS will give it a commanding position the rapidly-developing "information industry" based on a marriage between com-puters and telecommunications.

Still hanging over the com-pany is the U.S. Justice Depart-ment's anti-trust case, now entering its 12th year. There seems a good possibility that a ruling will inally emerge during the coming months, though opinion among observers remains divided over whether

Some have speculated recently that the Justice Department may have lowered its sights and would settle for a division of the company into a the aggressiveness of the 4300 series launch suggests that the

the his still ove independent of the history of the

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Manufacturers remain fairly confident

THE COMPUTER and electronics industries have shown magazine forecasts a rise of among their members—especia remarkable ability to ride out the worst economic storms of the past decade. Basking in the sunshine of rapid technological innovation, the most successful manufacturers have been able to counter both inflation and recession by turning out a stream of products which offered performance steadily lower prices.

Can this resilient growth be more than usually clouded hy worries about energy supplies, social change? Most companies in the industry appear to believe that the answer is yes, albeit some qualifications which will be examined in a moment, following years the computer and electronics industries should continue to grow at a sub-stantially faster rate than the generally sluggish industrialised

In the U.S., International Data Corporation (IDC) betieves that total spending on information processing equipment and services will increase by about 14 per cent, less than a percentage point slower than last year. Moreover, a survey hy the American magnifications found that most the American magazine data-processing manufacturers expect this growth rate to remain in double digits until at

Within this overall projection, however, forecasts for individual product lines show widely differing pictures. IDC believes that mainframe computer revenues will rise by only 7 per cent against 16 per cent last year, but it expects growth of more than 20 per cent for word and text-processors, distributed data processing equipment and data communications products.

In Western Europe, where the general economic outlook arguably even more gloomy than in the U.S., the prospects stand up in the face of the 23m lines by 19 for the industry are also determination by clerical staff 3m lines today.

almost 13 per cent in the market ally in the UK-remains to be for computers and related equipment to about \$16bm.

Smaller computers are expected to perform particu- development of new office larly well, as their steadily fall. equipment, in which computers numbers of first-time customers be equally important, will lead into the loarket, Mini-computer sales are expected to rise by about 23 per cent, and small The office is only one of the systems by about 18 per cent. ncw markets that is being sustained in a future that is The medium-sized mainframe opened up to electronic techmarket is projected to grow by nology. As micro-processors, 10 per cent, stimulated by widehigh interest rates, protect spread price-cutting in the wake become cheaper, smaller and tionism and rapid political and of IBM's introduction of the cleverer, applications for them

Growing demand

Continuing buoyaocy at the lower end of the market is also foreseen hy Creative Strategies International. a California based consultancy firm. helieves that the market for small husiness systems world-30 per cent annually up to 1983, with peripberals like data disc drives showing a particularly impressive per-

Where is the impetus for this projected expansion coming from? Most computer manufacturers ended the year with healthy backlogs of business which in some cases (such as 1BM's 4300 series) stretch out two to three years ahead. These order books could, of course, shrink if customers decide to retrench on capital expenditures as business conditions become

Many manufacturers maintain, bowever, that data-pro-cessing equipment bas now become so inexpensive and can ductivity gains that a number of companies will choose to economiae by shedding office staff and acquiring computers to do their jobs.

How well such forecasts will

aeen. But it seems inevitable that over the next few years economic realities and the prices attract increasing and telecommunications will to a steady increase in office

automation. based on tiny silicon chips. cleverer, applications for them multiply. They are already multiply. They are already being built into household appliances, automotive ignition and carburation systems, machine tools, home entertainment, and pocket calculators, to name only a few uses.

In the U.S., purchases of micro-processors by the motor industry are expected to boom this year, despite generally weak car sales. This is because car manufacturers need the devices to meet the atricter mileage and emission control standarda which go into effect at the start of the 1981 model year in the autumn. Every 1981-model General Motors car will contain at least two micro-

Another factor tending to offset the impact of cyclical cronomic trends is expenditure on telecommunications equipment. This is estimated to be running at more than \$30bn a year, worldwide, and because projects are planned in advance of even the most optimistic semiand take several years to complete they are relatively immune to the general business climate.

latest exchanges, such as the Post Office's System X, are computercontrolled and rely heavily on

PERFORMANCE AND PROSPECTS

GUY DE JONQUIERES

provide an additional powerful underpinning to growth extending well into the next decade, and possibly even beyond.

Ironically, in what expected to be a recession year for many Western economies. most computer manufacturers ing of demand for their products than about difficulties in obtaining adequate supplies of elec-tronic components. Since the middle of last year, there has been a steadily worsening sbortage of several types of comthe world market. It bas affected particularly severely supplies of 16K random access memory (RAM) chipa, which store more than 16,000 bits of information and are an important adjunct to computers' central processors.

Vigorous market

Acrording to some recent estimates, demands for these romponents in the U.S. will almost double this year over last. The vigour of the market has outstripped the expectations conductor manufacturers, most of whom are now adding production capacity as fast as they can. But it will be some months before this works through into easier aupplies. Meanwhile, the steady downward trend in com-ponent costs is likely to be temporarily reversed.

Increased military spending of more advanced components by many Western governments has been delayed by technical in the wake of the Soviet occupation of Afgbanistan will tomers have switched to 16K RAMs to fill the gap. IBM purchased large quantities of the devices last year for its 4300 series computers after discovering that it was unable to produce in sufficient quantities the very advanced 64K RAMs originally intended for the

> Despite these bullish influences, bowever, the road ahead may not be quite as smooth as it has been during the past de-cade. One view now being put about in the U.S. is that the growth of salea of small computer systems and specialiaed business products—both major factors fuelling the industry's recent expansion-could prove a point of weakness in the

It is argued that many pur-chasers of small systems are themselves small companies that are bigbly sensitive to the impact of recessions. Moreover, as the romputer industry tailors its marketing techniques and product lines increasingly to customers' specific needs, it risks becoming more dependent on their economic fortunes.

While these factors may not depress the industry'a growth too much over the long term. it could make it more sensitive fluctuations in the businesa

A more widespread source of concern is the steady rise in costs, particularly among semi-conductor companies. Cheap as electronic components. It is forecast that the world market overall demand, the tight are in large-volume production, market reflects supply hiccups, the expenses involve in design The introduction of a number and setting up the necessary

becoming immense.

Mr. Fred Bucy, president of ing recently that cost pressures will make it increasingly difficult for American companies to maintain their lead in microelectronics innovation in the years to come. He forecast that just to preserve their current market position they would bave to invest between \$25bn and \$35bn over the next decade, compared with about \$4bn over the past 10 years.

this scale, companies are increasingly seeking to ronsolidate their strength through mergers. The need of U.S. companies to tap fresh sources of capital, combined with the akness of the dollar and the relatively depressed state of Wall Street, bas made the American industry an attractive bunting ground for foreign investors anxious to lay their

Faced with expenditures on

resources.

Another route to the same Texas Instruments, gave a warn- end is through state support nationally competitive. This approach was chosen by in Britain when it set up Inmos Inmos has already ducts. received £25m in Government grants and is awaiting official approval of a request for a

second £25m tranche. It remains uncertain, however, whether it will receive the sizeable further amounts which it will most probably need to finance its operations beyond

about 1983. The Japanese Government has also provided considerable sup-port for the development of its national micro-electronics industry, which is now attacking both U.S. and European markets with vigour. Its success has aroused sharp anxiety among

manufacturing facilities are hands on high technology have been pressing their to enable them to remain inter-

> So far, the Federal Govern. the National Enterprise Board ment has made no positive in Britain when it set up Inmos response: a recent study by the to develop and manufacture U.S. International Trade Con-advanced semi-conductor pro-mission concluded that the Japanese penefration of the American market owed more to superior productivity than to unfair trade tactics. But U.S. semi-conductor . manufacturers are continuing to demand a better deal.

While the excess of demand over supply remains as strong as it is now, the world market for electronics products is likely to stay fairly open. But as manu. facturing costs soar and international competition becomes atil more cut-throat, a growth of demand for some form of trade protection from those who have failed to stay in the fore-

Systems suit a wide range of operations

control computers began to be applied to continuous and semicontinuous process industries, such as oil refining, petrochemicals, pulp and paper, steel and food processing. It was widely thought that conven-tional control instruments would soon be largely displaced by what was called direct digital rontrol, in which the computer would carry out the necessary calculations and send instructions directly to the Instruments located around the

In practice, the application of process control computers proved to be slower than the optimists bad expected, partly because the computers themselves were too expensive and too unreliable. The programming of computers to control industrial processes was more complex and more time-consuming than in conventional data

Finally, the effectiveness of process computer systems was dependent on the of the instruments nsed to measure and analyse what was going on inside the

In all these areas there have been striking improvements during the last few years, but no advance has been more important to process control than the introduction of the systems and increased their use of the microprocessor to flexibility and reliability. replace the conventional array While there will always be a

demand for conventional pneumatic and analogue control digital Instruments and systems is gathering pace. Process con-trol computers are no longer confined to large, complex operations like an ethylene plant or an oil refinery, but can be extended economically to a wide range of smaller-scale process operations. Moreover, the gains in

(including energy which are made possible by the newer, microprocessor-based rontrol systems is encouraging a trend towards "retrofitting" these systems on older manufacturing plants. Competing for this large and

GEOFFREY OWEN

PROCESS CONTROL

manufacturers, instrumentmakers and a number of softown aystems and huy in bard-ware to auit each application. It ls knowledge about industrial processes rather than knowledge about computers which is the key to success. Thus, in the case of Honeywell, one of the leaders, the supply of Industrial control systems is a distinct activity from information systems and stems more from the company's traditional strength in control instrumentatraditional tion than from its know-bow in

Breakthrough

It was Honeywell which, in 1975, achieved an important breakthrough in distributed systems with the introduction of the TDC 2000. The company describes it as "the first process control architecture to integrate microprocessor hased controllers, video-based operator

analogue controllers. recorders and other instruments with an Integrated system.

The TDC 2000 Is now manufactured in the UK as well as in the U.S. One of the biggest European orders placed last year was for three systems, valued at £1.6m, to control catalytic cracking unit at refinery in South Wales.

Honeywell's two U.S.-owned rivals, Foxboro and Taylor, bave introduced similar systems the Foxboro Spectrum and the Taylor Mod III. Both these companies are major instrument manufacturers and they produce a wide range of pneumatic and analogue controllers as well as digital controls and systems. Similarly, Kent, the British needs.

partly owned by Brown Boveri lts Kent P4000 integrated control system which competes against the TDC 2000 in many applications. Another important UK-based

contender is GEC Industrial Controls, whose GEM 80 system, introduced last May, has bad considerable success. One of the biggest orders was for the mill in Yugoslavia; for which Davy is the main contractor; the GEC part of the order includes 30 GEM SO controllers. One of the pioneers in process

control bas been Ferranti, whose Argus computers are widely used in steel, chemicals, power generation and other applications. Another strong UK based concern is Babcock-Bristol which brings together Babcock Controls with the Bristol division, formerly part of American Chain ond Cable.

An interesting development stations and process control computers into a single system. Is the Negretti and Zambra linked by a low-cost data-hiway."

MPC 80. This is an old-established British instrument into company whose entry into digital systems was facilitated hy co-operation with the Departof Industry's Warren Spring Laboratory and with the British Sugar Corporation. The which can he used to control a single group of machines or can be huilt up into a romplete system for controlling an entire plant.

A variety of other equipment is on the market ranging from programmable logic controllers (such as the lTT Director) to trollers (like the Honeywell DCP 7700) and to full process control systems. of devices available to bim from ronfiguration best suited to his

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The last 20 years have seen Britain

rapidly lose face.

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To outside observers, this seems

to have been self-inflicted.

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workers want-namely, a higher standard of living-can only be achieved by increasing productivity.

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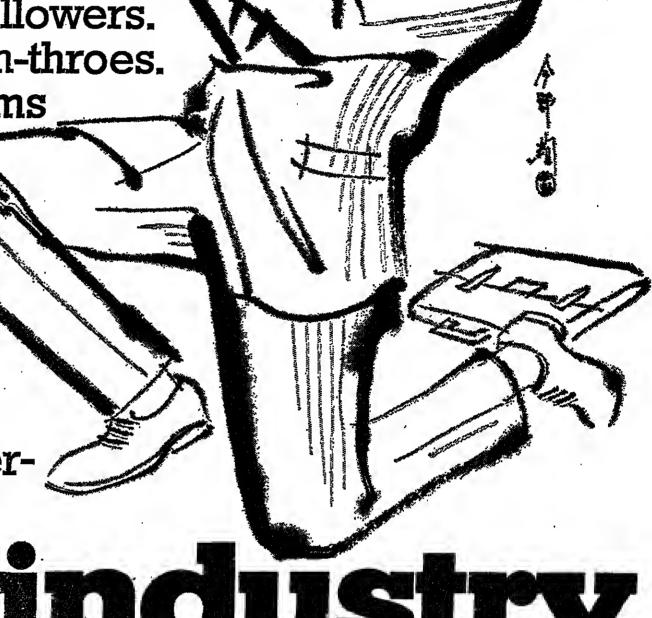
to remain competitive with the rest of the world. Orders, jobs, and even factories will be at risk. Unless something is done.

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THE COMPUTER INDUSTRY VI



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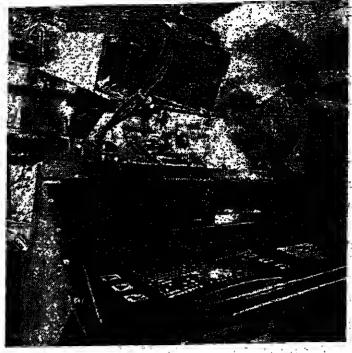
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industry, i matter and commission control	Mantrane	Mini	Micro	MASI	MASII	MAS-M	MAS-H	KIBS	Spacial Std. Sy
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MAS run on a wide variety of computers, including the major manufacturers shown here.	IBM ICL	DEC HP IBM	INTEL	ou su	would li y MAS, p rinadon l	lease co	r informa ntact Brin	tion dley Rey	maud

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Computers are exported to more than 100 countries from NCR's manufacturing plant in Dundee, where work proceeds (above) on a self-service auto-teller terminal, the NCR 1780, which was also designed in Scotland. NCR worldwide employs more than 62,000 people

Left: Production of Burrough's new range of small computers, the B.90 series, has begun at the group's Cumbernauld plant in Scotland. Burroughs reported new records for earnings and orders, worldwide, during 1979. Net earnings for the year were \$305.5m, an increase of 21 per cent over 1978.

Astonishing advances in new technology

PROGRESS IN THE U.S.

STEWART FLEMING

SCIENCE FICTION'S vision of a world dominated by humanoids, more clever than their creators, may have appeared to be coming a step closer last November when Texas Instruments announced that it could now offer a speech synthesis system which can be built into machines to enable them to talk to people.

The company's breakthrough has come, in part, because of further advances in microelectronics which have allowed it to cram on to one computer chip all the functions necessary for a micro-computer-controlled system which can reproduce.

The pace of technological advance in the microelectronics and data-processing industry, which has produced a long-term yearly decline in the cust of computer hardware equipment, averaging between 15 and 20 per cent, has been a prime factor in the astonishing growth of the Industry. It has offered business improved productivity and management techniques, at a stable cost, at a time when labour is becoming more expensive and corporations more compiler.

complex.

As the Texas Instruments advance suggests, the pace of technical change is not slowing. Whatever the more exotic implications of this may be, what is already apparent is that this rapid innovation is already changing the structure of industry in unexpected ways—and perhaps nowhere in the world is this more evident than in tha

The past year has seen a succession of developments in the U.S. pointing in this direction—some, like the giant oil company, Exxon's \$1bn hid for an electric motor manufacturer, Reliance Electronic, outside the data-processing industry. (It was partly an Exxon advance in microelectronics which led the company into this diversification.)

Data processing

But many of the changes taking place—in part, spurred by technical advance—are directly related to data-processing and computerisation, including, for example, the accelerating pace at which the telecommunications and data-processing industries, are converging not only in the use of common technology, but also in the way corporations in one of these businesses are expanding into each others territory.

what is happening is that major companies are gearing-up for what they expect to be a multi-billion dollar market, providing equipment and services for what has been termed "the office of the future."

In fact, the office of the future is already partly here, but in the next few years its presence will become more obvious and will have a clearer impact on the earnings of companies supplying it.

Major companies are gearing up to link their widely-dispersed offices to high-speed digital communications systems, In some cases using satellites and earth stations, which will transmit information, not just between telephones and computers, but also between copying machines, video equipment and word processing machines in different locations, developments which, for example, are expected to reduce the volume

Office Products

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Office Automation
Additions

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Honeyved
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Wang
Datapoint

Communications

ATT
GTE

LEADING U.S. COMPETITORS

- in the race to supply the office of the future.

of inter-company mail sent demand for e through the traditional post produced and office systems.

The copying machine manufacturer. Xerox Corporation's \$209m acquisition of the communications company, Western Union International: and General Telephone and Electronics' \$55m acquisition of Telenet were just two examples of takeovers last year, which were motivated by efforts to prepare for the office of tha future market.

Apart from the longer term adjustments in the structure of the computer and telecommunications industries within, what has traditionally been seen as the computer industry itself, there have been dramatic

Perhaps the most significant was the emergence of a more aggressive and competitive International Business Machines, the company which has dominated the computer industry, but which has often been viewed as conservative in its application of new technology to its products and in its pricingmainly because of the need to protect its existing customers from too rapid change.

Last year, however, in the face

of mounting competition IBM responded by introducing a new medium-sized computer, the 4,300 series aggressively-priced and incorporating more advanced technology than many rivals had expected. The move ahocked the "plug compatible" manufacturers who were undercutting IBM by selling hardware which ran on IBM software (see pages II and III of this

By the end of the year, ITEL had virtually withdrawn from the computer industry after reporting losses of \$226m in the first nine months of its financial year. Amdahi's which had been the wunderkind of the industry, also reported a profits collapse.

Ironically, IBM itself did not emerge unscathed from its changing policies, for the first time since 1951 Wall Street's favourite growth stock reported a decline in earnings in 1979, albeit a slight one, with profits dropping from \$3:1bn to \$3bn. For most of the other major mainframe computer companies, however, the further heavy

demand for equipment last year produced another strong year's profit gain.

Honeywell's earnings were up 29 per cent at dollars \$260.5m, Burrough's 20 per cent at \$305.5m. Sperry Corporation, after nine months, recorded a 23 per cent gain at \$189.6m, and Control Data was up 38.7 per cent at \$124.2m.

As they look ahead into this year, share analysts are anticipating a significant slowing of profits growth, despite the lodustry's strong order back-

In previous periods of slug-should distribusiness activity, the com-expected

puter companies have generally managed to come through without serious earnings declines—indeed, in the 1874-75 recession, the steepest in the post-war period, earnings advanced around 10 per cent in each year.

Source: Arthur D. Little Inc.

In spite of the uncertain economic outlook, Wall Street analysts are still projecting gains for 1980, but in the 10-15 per cent range. They point out that the major companies are believed to be operating with low inventories and have plans ready to cut back production quickly, if market conditions should deteriorate more than

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FINANCIAL TIMES EUROPE'S BUSINESS NEWSPAPER

Financial Times. Bracken House 10 Cannon Street, London EC4P 4BY Telephone: 01-236 1434 THE MANUFACTURE and see national Governments and the of computers in Europe is a companies. The state has ally and collectively, at the level of the European Commitsion-feel they do not make sufficient computers and that

they do not use enough of them.
The main "hogey" is, of course, IBM, the U.S. multinational—the tenth largest company in the world in terms of sales and third in profits, as well as being the world's largest electronics company, by any measure, and possessing a customer base of 60 per cent of world market, (50-60 per cent in Europe). That has to he a problem for European com-panies which seek to grow, and European Governments which hope to encourage them to ex-

The problem is further compounded by three other factors; first, the second-string computer companies — Burroughs, Honeywell, NCR, Sperry Uni-vac and DEC—are all American, too, bringing the U.S. share of the European market to around

80 per cent. Second, the most aggressive marketers of computers are now the Japanese, who identified the sector as a crucial one over a decade ago, and whose research and development is

now bearing fruit. Thus, the attempts to increase European market-share run up agsinst an enormously powerful established force and a fastgrowing contender-while also being complicated by the third factor, which is that there are so few signs of collaboration hetween European computer mak-ers, All of them are at least as keen to "steal s march on each other," as to collectively claw back ground from the U.S. or

beat off the Japanese. To describe what response there is, and indeed to give the outlines of the industry itself, it is necessary to look to three

politically touchy husiness. In always been heavily involved simple terms, it is so because in computers, mainly because European countries individuo of the Isrge funds it requires ally and collectively, at the (and the high risk attached to the business, which deters the banks). and also because a computer industry is seen as a strategic necessity by most advanced economies.

• The EEC has recently published a report, "European society faced with the challenge of new information technologies." This attempts o draw guidelines on how the memher states might better tool thair data processing

Stressing the central importance of information technologies to advanced economies, the Commission committed itself to establish a social policy to aid tachnological innovation and to attempt to create a homoattempt to create a homo-geneous market in Europa Siemens with R and D support, for kelecommunication services. and, like all other states (though The Commission also seeks to promote investment in the computers. industry by the private sector and simulate exports, encourage joint developments betwee European companies and enhance the Commission's own data pases and advanced com-munications systems.

Data network

Some of these initietives are already under way: the Euronet service. for example, sponsored by the EEC, ia a data network which might form the basis of s public. European-wide data communications system.

But, as the Commission's document fully admits, there is a long way to go: "Europe has not succeeded in creating the common market of ideas or the mobility of talent that exists in the U.S.; the different astional aid programmes have fostered competing national enterprises, while leaving key long-term

"Europe has neither the con-

EUROPEAN DEVELOPMENTS

JOHN LLOYD

the common strategy of Japan, while the great social debate has so far been confined to national bounds."

It is to these national bounds that we now turn. All major European national Governments have taken a direct and continuing interest in their major computer manufacturers. Both the British and French Governments played key roles in the creation of their lead companies, the Italian Government has earmarked £500m for the computer/communications sector; while even the Germans; much the least interventionist less so) tend to buy German

Because of the large sums spent by various states on their computer industries, because of that industry's criticial role in technological modernisation and in defence and because of that definabla commodity, national prestige, each state is largely committed to its "own" manufacturer and to its strategies. In each case, the state and its agencies are major purchasers—often the major purchaser. Thus, they have created a mutually dependent relation-ship—the company depends on the state for support and, from time to time, for funds, whila the state depends on the company to cater for its data pro-

cessing needs. This relationship, however, is now under threat, as the EEC better and faster communicamoves to enforce tha measures agreed at the Tokyo Round of the General Agreement of Tariffs and Trade. For the computer industry, the Important Siemens, measure is that preferential showing

liberalised, and that purchases of computers, in theory at least, will he open to anyone in the market from the end of this

The move bas worried the European companies, who see U.S. and Japanese competition ready to snap up their hitherto protected preserves.

A variety of measures are being discussed to ward off the worst effects of the change: one of the more interesting has been canvassed by Britain's ICL, which has suggested a European-wide purchasing policy. As logies, creating a high-level
outlined by Dr. Christopher overseeing committee conwilson, ICL's managing direct cerned to ensure that the new tor, the scheme would involve the concept of "second preference"—that is, where the Government of any European division has access to a large country did not wish to pur- and growing research and deveconntry did not wish to purchase from its "own" supplier, it should turn as a second choice to another European manufacturer, rather than to

one from an overseas country.

So far, the concept remains just that: but it is clear that the risks of substantial loss of busi-ness are high, and thus the company Honeywell. The comincentive to agree a scheme which might offer some protec. State leverage, has been medium tion, but not run foul of the strongly supported since by the capacity. GATT requirements, is high.

be taken to mean that the major ing private and some export European companies are facing business, too. serioos market problems. Diffimore information, and

tion of it. • In West Germany, the major company in the computer field is the electronics giant, though Nixdorf is success in smaller has only recently come out of some years of loss; it has had very strong competition in its home market from IBM-whose major European plants are in West Germany—and has lacked a full range in medium and large machines.

Two moves have bettered its position: first, and most importantly, it has linked with the Japanese company Fujitsu -Siemens will market Fujitsu's large machines while Fujitsu will market in Japan, Stemens. peripheral equipment. Like Siemens' own range, Fujitsu machines are IBM-compatible.

New technology

Second, Siemens has greatly Increased its spending on micro-electronics and related technotechnology pervades all of the company's operations. This means that the data processing lopment division, an element which does not ensure success Computers (ICL) thinks not a which does not ensure success but is one of its preconditions. has developed its own technology, and in the 2900 range, and an analysis and analysis and an analysis and analysis and analysis and an ana pany is a Franco-American venture, Cii Honeywell-Bull, where much of the initial techpany, which was created by Government, though it has been None of this, howevar, should relatively successful in attract-

While the link to Honeywell, culties they do have, but all are one of the largest of the second-growing and all are sharing in rank (after IBM) U.S. com-the continuing boom in demand panies, has been of benefit technically, the familiar problems of joint ventures in the need to secure customer accept marketing area continue to dog ability of new technology and are to be merged with Cii, though, so far, no concrete

Siemen's computer division . In Italy, the domestic com pany, Olivetti, is the weakest of the native Europeans: the Italian market is strongly dominated by IBM and Hisi-Honeywell,

However, recently concluded a major deal with Hitachi of Japan, closely paralleling that struck between Siemens and Fujitsu, under which the Japanese company will supply its medium and large machines to the Italian

goes beyond the potential it holds for Olivetti. Like Siemens/Fujitsu, Olivetti-Hitachi are IBM-compatible—indeed, the Hitachi and Fojitsu

machines were jointly developed ment-sponsored programme of co-operation for computer research. Thus, Europe now has two Euro-Japanese ventures, closaly similar in technology (at least at the high and) which are IBM-compatible. Will that give them a large advantage. and is it a pointer to future developments?

claims to bave the most modern architecture in the world. Since its acquisition of Singer Business Machines in 1976, ICL has been strong in small machines it has always had considerable medium and large mainframe

It has been a considerable

technical innovator, and has been the most successful of European companies in the exare well-rehearsed are—like everyone else—IBM; a domestic market which may go into a deeper recession than most; a the company. There are per-sistent rumours that the UK and its "protected" market. Yet, Italian operations of Honeywell the cempany has parformed servers believe it will continue

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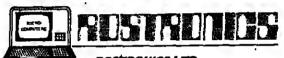
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ONE OF the Japanese dreams which didn't come true during the heady days of rapid economic growth in the 1960s and early 1970s was the creation df a computer industry giant to and overseas. The Japanese companies which rose to the challenge did manage to capture the bon's share of the bome market away from IBM (though IBM is still the largest single computer company in Japan), software development, but they have found the vital Fujitsu and Hitachi actually road to expansion overseas, overtook IBM for the first time long and hard.

Japan began in the 1950s, pay much mora attention to the roughly ten years behind the Japanese. Since then, the tecbemergence of IBM as the lead- nological advances have shifted ing computer company in the world. The experts at the Ministry of International Trade and Industry (MITI) quite wisely recognised that computers would play a vital role They can now claim to produce in the future economy. More the most powerful computers in importantly, they realised that developing a domestic computer industry was well beyond the capabilities, at that time, of the private sector alone. Thus began a Government

relationship with the computer industry which is perhaps stronger than that with any other industry in Japan, MITI encouraged the import of foreign computer technology (in return for which foreign com-panies, such as IBM, were allowed to enter) and limits on

Government aid came in the form of encouraging research and development, regrouping the companies involved in comso that davelopments might be shared. It also pro- 28 per cent share. Last year, vided subsidies initially to MITI had to go so far as to warn develop main machines and the domestic and foreign com-peripheral equipment to rival puter companies against price-IBM and now to advance in the cutting competition to gain field of VISIs and computer Isrger market shares. This was

goal was to foster companies of a new series of computera, which could join together in early last year, and the advancompetition with IBM (initially, three groups of two companies each were designated). But the competitive spirit among the Japanese companies themselves proved too strong to allow for any actual mergers:

Six companies

panies involved to some degree enough base to produce a giant in large-scale computers. These computer company. Slowly, are Fujitsu (the industry therefore, the Japanese have leader, with about 19 per cent been trying to sell their wares. The Japanese now realise of the domestic market). abroad, so far with only limited that these kind of ties to other Hitachi (14 per cent, nsing the been grouped together), Nippon Fujitsu, the largest, and Hitachi Electric (41 per cent) and have led the moves abroad Toshiba (4.5 per cent), Mitsu-bishi Electric and Oki Electric

second two-company grouping. but Toshiba, two years ago, abandoned the business side of big computers to a joint venture with NEC after suffering heavy losses. Oki dropped out of hig computers in 1964, but develnped peripheral equipment with

The pext stage in MITI directed development was aimed

JAPANESE COMPANIES

RICHARD HANSON

group and NEC and Toshiba in the other. Futher subsidies are being offered to the groups for

in the field of general use com-The computer industry in puters in 1974, forcing IBM to hack and forth, with IBM trying

Strong position

Producing the most powerful computer, however, is not necessarily the secret to effectively challenging IBM on s global hasis.

Unlike the other industries in which Japan bas established a atrong position around the world, such as cars and eleccomputers · require tronics. resources and investment much greater than the Japanese can now afford.

The Japanese companies must also keep a close watch on the foreigners in their own markat in which competition is suff and where IBM holds about a oftware. triggered, apparently, in the The Government's original aftermath of IBM's introduction tages that some foreign makers gained while the yen was appre-

ciating. The Japanese market for computers is the second largest in the world, after the U.S., with about 10 per cent of all the installed units, compared with a

45 per cent share in the U.S. But the Japanese domestic There were six Japanese com- market alone is not a large

ishi Electric and Oki Electric. Fujitsu first invested in computers, as well as for cars NEC and Toshibs formed the Amdahl of the U.S. to take and sircust. advantage of the American
company's advanced technology,
has been to gradually build up
the b ties with other computer culties in past economic relamakers with sales agreemants, tions Jspan has had with its joint ventures and cross

the form of Original Equipment world to chip away at the IBM at VISIs, lining up Fujitsu, Manufacturing (OEM) arrange- giant.

Hitachi and Mitsubishi in one ments, where it provides other companies with main frame computers. Amdahl sells Fujitsu com-

puters under its hrand name in the U.S., and Siemens does the same in Europe. Fujitsu, however, is hoping to break away from the OEM type agreements in tha U.S. Negotiations are being com-pleted with TRW, of the U.S. products up to medium size computers under the Fujitsu

> computers with Secoinsa. With these ties gradually building, Fujitsu would like to see about 30 per cent of its computer sales overseas in four

> hrand. In Spain, Fujitsu has started the production of office

or five years. Hitachi ran into difficulties last year with its OEM computer exports to the U.S. because of the financial problems faced by ITEL (which had marketed the Hitachi machines), after IBM introduced its E-series. Exports came to a virtual balt, and the company only recently signed an agreement with National Semiconductor (the successor to ITEL's computer division), for

non-exclusive salas in America. Hitachi bas also signed on with Olivetti in Italy to sell computers on an OEM bssis, first just in Italy but later perhaps throughout Europe. In the UK it is starting joint research with ICL. Hitachi would prohably prefer to sell under its own brand and through its own networks. But tha one Japanese company that tried to do that in Enrope with minicomputers, Mitsubishi Electric, in the early 1970s, failed. That experience gave the Japanese a better appreciation of the costs and difficulties in volved in establishing overseas

Big success

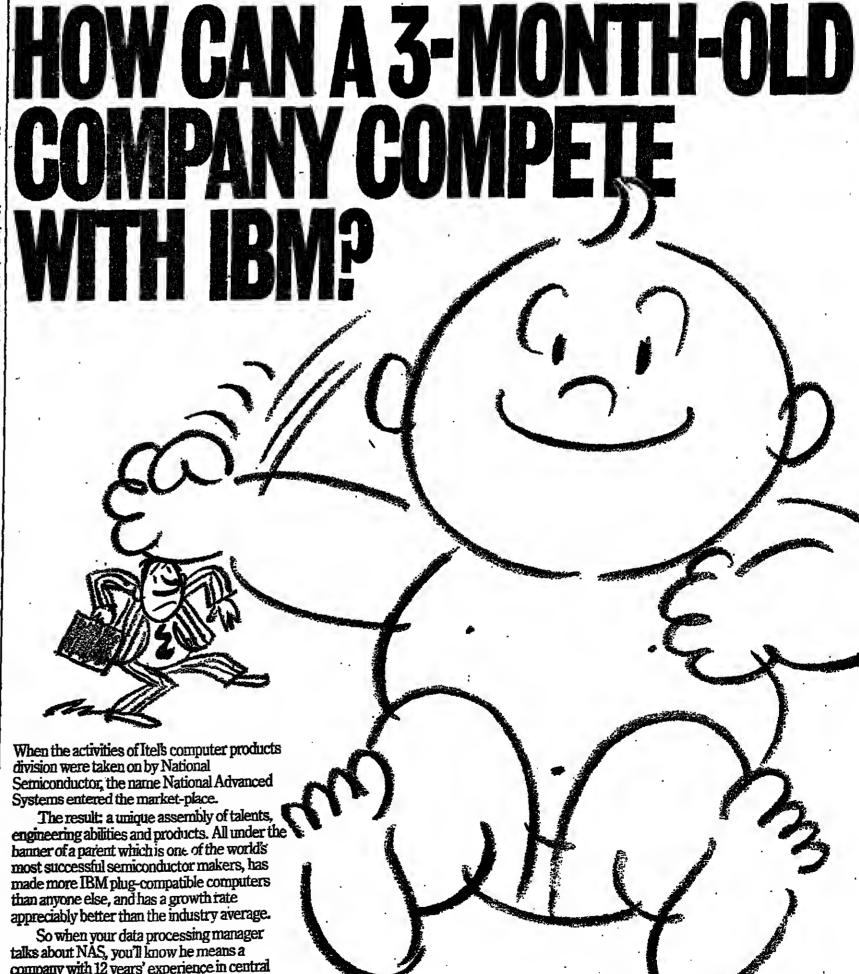
Hitachi has, however, beer very successful so far in selling computers to China, with 40-50 medium and large-size computers, either delivered or on the order hooks.

success. None of the computer companies around the world same main computer technology companies has more than 16 present the only realistic as Fujitsu, as a result of having per cent of their sales overseas. approach to future expansion of the computer business. MITI is now officially encouraging The strategy since 1972, when such technological ventures for

trading partners.

ficences.

Fujitsu may have taken the lead overseas, but even its most important sales ties are still in smaller companies around the



company with 12 years' experience in central processing units, peripherals and software. A company which is more than capable of

taking on even IBM. Not bad for a three-month-old.

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temperamental — but, neverthe-less, robust and capable of long TWO ENTERTWINED developments have meant that com-

puters and telecommunications service." The later technology, introduced for the first time in 1940. is known as crossbar, or matrix switching, in which lines are represents a possible connection

has resulted in computerised switching, which, in turn, bas seen the development of a range of new exchanges which have appeared during the past switching had been static for nearly a century, relying on the invention of Almon Brown

"wired logic"—that is, the "instructions" in the control were inherent in the wire paths built into it. However, the introduction of computers into the exchange meant that the logic was programmable, and could thus be varied according could thus be varied according 'seveoties, now incorporate both to the computer's software. At SPC and digital transmission. the same time, the actual switching could be accomplished by integrated circuits, rather than by electro-magnets or reed

Computerised control,

TELECOMMUNICATIONS JOHN LLOYD

THE COMPUTER INDUSTRY VIII

Developments closely linked

lald out in vertical and horizontal arrays so that each junction closed when one number dials

Matrix switching, when intro-duced, was electromechanical — but the control system used to supervise the matrix may be programmed in advance to operate the system in various

At first, this was done by Strowger, a Kansas City under-taker, who patented the Strowger or "step-by-step"

or as automatic call transfer, store

the one of the two principal obvious advantage is that the breakthroughs which has in- new exchanges cost much less spired the new generation of to instal and maintain (though telephone exchanges. The other the cost of modernising and is digital transmission, where largely electro-mechanical networks will he high) and, thus, the speech is decoded from its charges will be held down. analogue structure into hinary

The disturbing feature for telecommunications workers is that they are felt to threaten jobs, and indeed thousands of jobs have been lost in telecommunications manufacture. The maintenance of employment in this sector will depend on manufacturers responding to the market for new services and equipment.

The first to develop these exchanges was the American AT&T network: since then, scriber are beginning to be obvious: more rapid, reliable, companies like Ericsaon, CITprocessor, a keyboard with
Alcatel, Thomson CSF, Philips,
Northern Telecom and General
ing facilities. The processor is
Telephone and Electronics haveseen as one way to raise secreall brought on competitive SPC while

the final stages of development. cur out, and, with text editing.

The main advantages pre-fatilities built into the process.

telephony, however, will be in the office, where the second major development with which we are concerned bas taken

First, the range of services offered is larger because of SPC, but second, office communications bave themselves become a major growth area.

Electronic mail

The main path driven towards the "office of the future" has been by the electronic typewriter, which has offered limited memory store (up to around five letters) and automatic typing facilities. With a capability for communicating with other electronic typewriters, these machines could operate as a primitive form of "electronic mail," at least within a given.

The next stage is the word

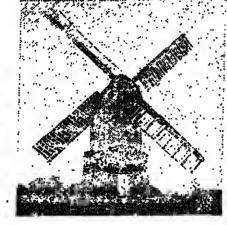
Siemens and the UK consortium of GEC, Plessey and STC are in the final stages of development. cur out, and, with text editing sently offered by computerised sors, even substantial changes

can be incorporated.
However, once word processors can communicate effec-ively, electronic mail has

sentially arrived. Further, word processors will, in the later eighties, tend to be linked into data processing cenires to greatly extend their storage and flexibility. At the same time, the data processing centre will develop links to intelligent copiers and to secretarial and to managers' work stations, which will consist of visual display units, keyboards and communications facilities.

In short, in a gradual, incre mental way, large offices will tend to become highlyautomated, with data and voice communications integrated into

Still further, computerised office exchanges ing on the market, led once more by IBM—will further enhance the speed and variety message



are now closely inter-linked, and

that the development of the one

technology increasingly depends

on the development of the

First, the post-war develop-ment of switching technology

Briefly, the technology

selection of contacts — the number corresponding to the

number dialled - one after the

other. It has been described as

"a technology rather like that of a steam engine—occasionally

involves

decade.

method, in 1886.

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o you despatch goods before checking credit? Thich invokes are to be settled this month?
Thich of your suppliers offer favourable discount ow many orders did you get last month/year to date? Are you operating in accordance with your

ow does this compare with the previous month/year? re you able to take advantage of substitute lines? The are your major customers?
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SYSTIME



code, and transmitted as on-off

signals then re-coded to analogue at the end of its journey.

Digital transmission is at once

more rapid, reliable and clearer than analogue signals.

Thus, the new generation exchanges, on the market in the

The advantages for the sub-

clearer calls and many more

features offered on his phone-

Many advantages

Communications will be one of the themes of this month's series of four Computermarket '80 exhibitions when visitors in Birminghom, Manchester, Glasgow and London will have a chance to study the Prestel information service. Computermarket opens tomorrow in Birmingham at the Albany Hotel, Above: Mr. Jeremy Mitchell, director of the Notional Consumer Council ith Mr. St. John Sandringham, of the Consumers' Association and head of "Tclewhich," at last year's unnouncement that the consumer organisations are to use Prestel.

Steady increase in automatic tellers

WHILE THE age of totally electronic banking is still a long way off, banks bave been steady automating towards operations Britain's clearing banks bave been using computer-controlled automated clearing systems which have speeded processing of cheques.

progressing are steadily—through the use of sent to the central computerminicomputers and microprocessors — towards greater use of electronics at branches. This development is apparent to the customer through the installation of electronic cash dispensers which can provide a service when the branch offices themselves have closed. The first of these cash dis-

pensers was introduced in Britain in 1966 by National Westminster Bank. They could only give out £10 a time in exchange for a plastic card owner by post. They were considered by and large an sidered by and large an emergency service only.

The offspring of those machines are far more sophisticated. Some allow the customer to find out his bank balance, and to order cheque books and statements.

teller machines because they ara simpler transactions performed by the buman teller. They take less than a minute to handle a customer's request whether a demand for £100 cash, or a balance inquiry. Unlike in the old days, the plastic card is returned immediately.

The heart of all the antomatic teller machines—or ATMs as they are called—is based on the use of a plastic card which has a magnetic strip on the back. On this magnetic strip is recorded the essential details of its owner's name, account number and the expiry date of the card.

24-hour service

When the customer wishes to the dispenser and so keys in his personal identification number. rolls in cash every weekmachine reads both the informa- banks. tion on the magnetic strip and. keved in. If these are valid, the

allows customers, in theory at between branches. least. 24-hour banking facilities. Initially the machines in the system were totally indepen-dent. This meant that all husi-

dent. This meant that all husi-ness carried out by the auto-tha Eurocard "T and E" credit many social considerations to matic tellers had to be card and the planned European take into account such as the accounted for in the traditional traveller's cheque. This—to be protection of individuals against way. The small computer inside based on the Thomas Cook frand and other abuses.

ELECTRONIC BANKING

ELAINE WILLIAMS

the teller prepares a statement organisation also plans to use on the business it has carried out during the day and this is operated accounting system. Every hank has the ability.

bowever, to connect the automatic tellers-via the public telephooe network or even a special private link—to the main computer so that while each transaction is taking place the central computer files are instantly updated.

Time saved

As the popularity of antomatic tellers grows so the banks which was swallowed by the find that baving a direct line to machine and returned to its the main computer saves time and is more efficient. When the tellers are "on-line" to the main computer they are able to give a more comprehensive service to customers than when the computers are not accessible.

In Europe, where there are 2,000 machines altogether, Britain has one of the largest These new generations of Britain has one of the largest machines are called automatic networks. The leaders in terms of aophistication and quantity are undeniably the U.S. and Japan. In Japan automatic tellers bave been fitted with passbook readers and a printer to produce written statements. In the U.S. there are more than 15,000 machines.

The need for more electronic banking systems has come about for several reasons; these include the refusal of bank staff to work on Saturdays previously a peak day for business. In addition the volume of business has increased dramatically since the 1960s more than doubling in a decade.

Another concern is increase in robberies from factories and offices. Companies encouraged make a transaction he puts the employees to open current card in the appropriate slot in accounts so that they can avoid the problems of handling pay-The small computer inside the so hand this problem on to the

The increase in business bas the number which has been put pressure on banks to pro-keved in. If these are valid the vide more staff—and elecvide more staff—and teller machine will allow the trooics, which allows them to customer to proceed with the maintain present staff levels, is maintain present staff levels, is This could be extended once a great incentive. The impact the banks decide the future There are about 1,000 auto- of central computing was matic tellers either installed another factor which prompted inside the bank's premises or hanks to develop more efficient "through the wall." which ways of transferring money

There is also a movement towards common European payment systems exemplified by

cash dispensing machines. To prove an effective system, most organisations believe that they must pool their resources and share costs.

It is thought that only when the system is arranged on a pool system such as carried out in Switzerland and Sweden can such a system work efficiently.

Electronics opens up endless possibilities for the banking world since it does not restrict the user in his use of the system. For example, if an automatic teller can be linked over the telephone to the central accounting computer there is nothing to prevent other pieces of equipment such as point of sale terminals (electronic tills) being linked into the hanking network so that a customer can buy goods and bave his account debited while he is still in the

Eventually this could lead to a completely cashless society where every item or service purchased could be paid for electronically either on a credit or cash system. We are already seeing the beginning of this trend In the U.S. some banks have gone so far as to instal their tellers inside the premises of large retail outlets.

In Britain the mood is much more cantious, since talks are going on between banks and major retail stores to decide the best way of tackling the introduction systems. It is likely that some form of experiment will begin later this year to establish what the problems will be.

Advance payments

However, Prestel, the Post Office's viewdata information service, allows the user to carry out a form of remote shopping. Using the keypad which control's the user's access to information from the large central information computer, it is possible to order goods over the network and quote a credit card number ao that the goods are paid for before being received.

form of banking, since it would not be too difficult to allow the user, through Prestel, to link directly to his own bank and anthorise a credit transfer from his account to the vendors. It will be some time, however, before such a system becomes operational, because there are

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THE COMPUTER INDUSTRY X

A strong belief that 'small is beautiful'

SMALL BUSINESS SYSTEMS

GUY DE JONQUIERES

higger mainframe machines

which dominated the market

depending on the degree of

decentralisation required and

the main computer.

lines and telephone connections

use but also capable of being

connected to a mainframe or used as part of a network.

ing from at least five different

The battle for the small busi-

linked terminals. Most

THE BELIEF that small is beautiful - or, at any rate, practical-is now firmly rooted among business computer-users. The overall market for small machines and systems is generally reckoned to be growing by about 30 per cent a year and is particularly strong in Europe, where the number of units installed is now estimated to be

The value of this installed base, put at almost \$15bn by one market authority, the Inteco consulting firm, is still only about a third of that of mainframes. But some recent forecasts suggest that in less than five years it will have risen to about half the mainframe tevel.

about five times that of main-

There is no clear-cut definitioo of what constitutes a small computer. A few years ago, it-would geoerally have been taken to mean a minicomputer, taken to mean a minicomputer, data-processing department, or small mainframe. These were Because computer time was developed originally for indusexpensive, on-lina operations triat applications, such as procontrol, and for scientific and technical purposes. Their name reflected their rather specialised functions, being a contraction of "minimal" computer, as opposed to "maximal" or general purpose machines.

Today, minicomputers are available with a panoply of peripherals and software which enable them to be applied to a wide variety of tasks short of the most demanding "number crunching" operations. Innova-into which it bas to be fitted. tions in the design of central processing units, notably the availability of very fast 32-hit processors capable of addressing vast memories, have made the largest minicomputers comparmedium-sized mainframes cost-ing considerably more.

Easy to operate

Further down the market the advent of the micro-processor, consisting of circultry etched on to one or two silicon chips, bas brought with it a host of new and retatively inexpensive machines. These are easy to set up and operate, can sit comfortably on a desk top and can bandle a range of common business tasks such as payrolls, stock control and word-

The dramatic fall in hardware pricea made possible by advances in technology and manufacturing methods is the major factor powering the ing from at least five different expansion of the small business directions, with new entrants businesses which were unable overwhelming supremacy en-

or unwilling to afford the joyed by IBM in the mainframe market, and it will probably be some time before the balance of

commercial forces stabilises. until several years ago. Purchasers prepared to pay £15,000 or so—the same price, electro-mechanical office equip-ment like adding machines have IBM pioneered this approach after all, as the managing director's Jaguar—now have a bewilderingty targe field of ment like adding machines have capitalised in their experience in marketing such products to secure a significant share of the products to choose from. Another important influence has been the trend away from market. Nixdorf of Germany has heen outstandingly successful, followed closely by companies such as Olivetti, Kienzle, Philips highly centralised systems, built around a single mainframe machine—access to which could often be gained only hy passing through a jealously protective

and NCR. Minicomputer manufacturers have turned their attention increasingly to the husiness market, though they have adopted varying strategies. Wang and MAI have enjoyed were kept to a minimum and many tasks bad to wait until they could be grouped together and processed as a batch. Increasingly, the tendency considerable success in the U.S., though the high cost of estabtishing a marketing and support today is to bring computer power closer to the user by distributing it downwards network overseas bas so far inhibited their penetration of the European market. throughout the hranches of an organisation. This can be achieved in a number of ways,

Sales increase

Digital Equipment, the main manufacturer of industrial minion the kind of existing system computers has been steadily increasing its sales of small business machines. It supplies these In the U.S., where far-flung computer networks are fairty both direct to final customers common, the most popular course has been to enhance the "intelligence" of existing and on an Original Equipment "intelligence" of existing terminals linked to a main-frama. This has been dona by equipping them with peri-Manufacturer (OEM) basis to systems companies which equip them with peripherals and software before marketing them as pherals which allow more computations to be performed locally, without reference to under their own name.

This approach has been made possible both by the falling cost In Europe, by cootrast, the relatively higher cost of leased of bardware and by the increasing demand for complex software needed for sophisticated used for data communications has tended to inhibit the use of applications. Two British com-panies which bave attacked the market with some success from panies have preferred to distribute computing power by this direction are the software houses Logica and Systime. The small business systems

installing small business machines intended primarily for "stand alone" (autonomous) sector is of growing importance to the big mainframe manufacturers, all of which have extended their product range downwards in recent years. In several cases, this bas been done by acquisition. ICL put ness systems market has been joined by contenders converg-Itself on the map by purchasing the small computer actities of Singer, wblie Sperry-Univac strengthened its position, systems market Computers announcing themselves almost strengthened lts position, bave now been brought within every week. So far, no single several years ago, by taking reach of large numbers of manufacturer can claim the over Varian.

below the level of small miniapparently been deterred by the narrow margins to be made on inexpensive processor based machines; and are waiting to see how this sector evolves before deciding wbether to plunge in Many of them tend to emphasise, as a main selling point, the advantages of purchasing from a company which can meet a In Europe, at least, manufac- user's needs as they expand out turers with a background in of a "family" of increasingly

> with its System/3, which sells for between £45,000 and £250,000, depending on the power and facilities required. Introduced almost a decade ago, more than 40,000 bave been sold. But delays in the lannch of its successor, the System/38, have encouraged a horde of competitors to move in on IBM's customer-base, offering machines that are more modern than System/3 and can be easily adapted to use the software developed for

Vla

Finally, from the other end of the industry spectrum, the larger semi-conductor companies bave been moving into the attack. Producing small business machines, built around components which they manufacture in large volume, repre-sents both a logical step towards vertical integration and an opportunity to add value to their existing product line at comparatively low cost to them-

According to Inteco, there are now about 150 suppliers of small business computers priced at up to \$500,000 trading in part of a complete package Europe. How much longer they in a market which has been expanding at its recent rate, is open to question, and it seems inevitable that sooner or later a shake-out will bave to take

One good reason for believing this is because the falling cost central processors, will increasingly favour large volume manufacturers. By the same token, the provision of applications software, support and maintenance is likely to account for a growing proportion of revenues earned from small business computers in the future. The winners in the longer-term are likely therefore to be those companies which bave established a strong marketing network as well as a record for technological innova-

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Dramatic shift in costs

SOFTWARE

GUY DE JONQUIERES

dustry bave undergone a minor revolution. The importance of bardware in the cost of a system has steadily declined. while the significance of software—the programmes, operat-ing instructions and other information which a computer needs to do its job-bas been rising. It is not unusual nowadays for software to account

DURING THE past decade, the economics of the computer in-

for as much as two-thirds of the total cost of an installation. Several factors have combined to produce this shifting balance. Undoubtedly, the most important has been the steady fall in the cost of manufacturing electronic compon-ents. This has accelerated dramatically with the development of micro-electronic tech-nology, which has enabled all

the circuitry contained in a room-sized computer of the early 1950s to he etched on to minute skicon chips, selling for a few pounds each. But computers are not much use without information to tell them what to do and how to do

it. They require detailed, stepby-step systems programmes to organise their internal operations, compilers to translate human commands into binary machine code, "libraries" of commonly-used routines, such as adding and subtracting, and applications programmes for specific tasks such as the pre-paration of payrolls or stock-

All computer manufacturers make such software available, often at extra cost. But with customers' needs varying widely, the range of computer applications constantly expanding and computing facilities spreading to an ever-increasing number of often unskilled users, there are plenty of opportunities to supply new and more refined types of software. which the manufacturers themselves do not provide.

Over the past 15 years or so, a large number of independent companies has spring up to meet this demand. It is esti-mated that in the U.S. alone there are now about 3,500 such companies providing consultancy, systems analysis and programming services, compared with 1,000 or so, a decade ago. Their business is reported to have trebled in value over the

surprisingly, rather less dramatic in Britain. The UK industry is generating perhaps £150m a year in revenues, but it is estimated to be growing by about 25 per cent annually.
Such services are the product

of highly skilled brains and are tberefore not provided cheaply. A top-grade consultant can command a fee of up to £1,500 a week, and even an independent programmer, called in from outside, will charge upwards of £250. The high level of fees is itself not a negligible factor in the increasing cost of software and services.

More efficient

The days are long past when these companies relied on sell-lng ready-made applications pro-grammes as their main source of income. According to Dr. Douglas Eyelons, Director-General of the Computing Services Association, the industry group, the design of business applications programmes by his members have actually been

falling off.
This is because any programme comprehensive enough to cover the needs of all potential customers will probably be too unwieldy to suit the needs any one individual user. However, a number of firms, known somewhat disdainfully in the industry as "body shops" will still supply programmers to write or refine applications programmes for Individual cus-

Instead, Dr. Eyeions says, the past few years have seen a steady growth in the design of systems software. This aims to improve the operating efficiency of a computer by ensuring that processing functions are performed as rapidly and logically as possible. However, as computing power becomes cheaper, and the need to economise on computer time becomes less compelling, ready-made business applications programmes could regain popularity.

same period to almost \$9bn a once-rigid distinction between The statistics are, not hardware and software has

tended to become somewbat One example of this has been the tendency among the systems and software houses to buy mini-computers from outside, equip them with peri-pherals and programmes and then sell them as complete packages, taking a profit on the discount offered by the computer manufacturer.

Advances in technology and

reduced components costs have made an even more significant contribution to this trend. In-stead of labortously feeding operating instructions into a computer, step by step, it has become common to huild them into etectronic circuits which are then "hard wired" into the circuitry of the machine. One advantage is that the information becomes a permanent feature of the computer and canoot be changed inadvert-

advent of micro-etectronics bas made it possible to have an entire micro-processor or memory unit designed and manufactured to perform specified functions. But because of the bigb cost of setting up the necessary production facilities. thla is extremely expensive, unless a large volume of output is envisaged.

The frontiers of a software business are shifting in another direction, too. From its origins in data-processing, it is now expsnding into new ground as the technologies of computers and telecommunications increas-ingly converge. Evidence of this merger is to be found in the development of computercontrolled digital telephone exchanges, in sophisticated weapons guidance and military command systems and in office automation,

The office of the future will robably consist of a number of different elements. These will include computers, both central mainframes and smaller machines used for distributed word-processing processing, copiers, facsimile machines. Over the past few years, the machines, dictation equipment nee-rigid distinction between and telephones.

All these different pieces of

equipment must be linked together in a complex information-bandling system which will allow them to communicate both with each other and with the outside world. Individual offices will be connected by a network of surface and satellite communications capable of handling data, text and voice transmission.

Fitting these different elements into a coherent whole will call for blghty-developed software. Clearly, there is no point in hooking a word-processor up to a computer uoless the two machines speak the same language. Complicated interfaces must be devised to ensure that this is possible. Switching systems must be designed which make the connections swiftly and at the right And powerful management systems must supervise the operation of the whole intricate network.

Expensive

The development of software is, bowever, becoming increasingly expensive, and the necessary investment can be justified only if there is a reasonable certainty of being able to sell the resulting product to a sizeable market. One British firm which has found this out to its cost is CAP-CPP, which spent substantial sums on the development of a bigh-level language for language for programming micro-computers. So far, however, the micro market has not grown as rapidly as the firm had hoped and its figancial results last year suffered badly as a

In . 1 effort to provide support for the industry, the National Enterprise Board National established Insac Products. (IPL), two years ago. Its aim was to stimulate the nevelopment of software products sultable for export through the provision of state finance and marketing assistance, perticularly in the U.S.

Five companies agreed to affiliate themselves with the organisation. As well as CAP-CPP, they are Logica, Systime. Systems Programming (SPL). and Systems Designers, (SDL). As a precautionary step to prothem against the possibility of future takeover bids, it was decided that NEB should take a stake in each company's equity. They were, however, to remain independent companies.

U.S. faces fierce competition from Japan

MEMORIES

ELAINE WILLIAMS

THE CREATEST strides which have been made in memories (which are used for storing all the information required by computers for their calculations) computers for their calculations) bave heen in the area of semiconductor memories. The
advancement made by semiconductor designers has heen
startling and this sector of the
micro-electromics industry is
fiercely competitive.

per cent by 1982, with the computer industry increasing its
share from 19 per cent, (as it
the electronics industry have
just completed its large-scale integration programme which
sought—and achieved—the aim
of making large silicon chips.

fiercely competitive. The measure of the achievewith a storage of more than 65,000 hits of information. are beginning to emerge.

tor memories is increasing rapidly. This market is likely to grow at an aonual rate of 14.5

ment is that, only a few years ago, the industry was bailing as a major achievement the ability to make silicon chips which have an involvement in as a major achievement the just a few of the U.S. companies ability to make silicon chips which have an involvement in which could store 4096 bits of some part of semiconductor of data. Today, chips with four memory development. However, times that capacity are widely- Japanese companies such as used in the industry and new Hitachi. Nippon Electric. Toshiba, Fujitsu. Oki and Mitsubishi bave new technology to rival the U.S. organisations.

BUREAUX

ELAINE WILLIAMS

takeover by United Computer

Others in the scientific and

technical field include the

Over the past few years, com-

puter bureaux have had to con-

tend with a major problem. The shrinking size and cost of com-puters bas encouraged com-

panies in the medium and small

range to turn their backs on computer bureaux and to buy

Bureaux justify themselves

because they claim that the cost of the hardware—the physical equipment—is only a small cost

of the total expense of comput-

ing. About 80 per cent of cost comes from providing the expertise, the people and the pro-grams development.

Decreasing cost This problem which the

bureaux have been trying to combat over the past few years has been exacerhated by the

concept of distributed processing which allows companies to

bave access to computers at

many offices and branches and

could mirror the type of facility provided by bureaux. This and

the decreasing cost of installa-

tion and huying the equipment

has made companies look more

favourably on buying their own

Many of the bureaux have reacted to the advent of distri-

clients install their own mini

computers, but giving them the additional facility of being able

to tie into the extensive hureau

Another approach has been to

provide clients with so called

intelligent terminals which are

capable of carrying out some of

the more mundane, but never-

theless expensive, operations at

their own offices instead of through the main computer.

This has allowed them to com-

pete more effectively with distributed processing and also

relieves the customer of having

to maintain his own equipment.

telecommunications as they

relate to the transmission of

data is also having its effect

on the industry. Traditionally

computer service companies such as Comsbare and IP Sharp

have used private, specially dedicated lines so that cus-tomers have a guaranteed link

between themselves and the

For example, users of the

communicate

Sharp service communicate with the company's Toronto,

Canada, computer centre via terminals linked into Sharp's

own private world-wide packet

switched network. However, there has recently been the

development and introduction of

public data systems over the normal telecommunications

which will eventually be im-proved to such an extent that

quality and reliability will be

comparable with the private

Sharp's service is also accessible via telex, via Tymnet and

via satellite or telex links from ships at sea. However, the com

pany says that most of its

economy.

The growing sophistication in

network if required.

their own computers.

French group SIA and UCC-University Computer Centres

Services.

and Scicon.

Market for services still growing

DESPITE THE dramatic reduction in the cost and price of computers-which bas put them within the range of even the most modest sized concerncomputer bureaux contioue to flourish. In Europe alone, some forecasters predict that the European computer services market will grow by an average of 18 per cent a year until 1982.

In the UK, the industry is valued at about £350m, and is ahout fourth in the league bebind the U.S., France and Germany. Today, the industry is split into two hasic types of Simply, computer bureaux can be likened to laundries-they take in unprocessed, untidy information and return it in an orderly fashion.

The oldest type of service which is provided by the bureaux—which has been carried out since the 1950s-is batch processing. Clients seed or take information to the bureau—which is typically payroll preparation and non-critical calculations-where time is not a pressing concern. The infor-mation is processed as it is received in batches and returned within a day or so.

The second type of servicewhich appeared in the mid-60s for the first time-is called on-line or interactive processing. This type of service proio his own premises which is capable of connecting directly to the bureau's main computer network so that the client can carry out his calculations imme-

Consequently, this type of service which usually demands resources and greater reliability of service from the bureaux is usually more expensive than batch processing.

While there are numerous small-sized bureaux, the industry is dominated by a few large companies such as Comshare, Atkins On Line (recently the subject of a take-over), the group SIA, and Computer Management Gruppen.

Many of these large concerns decided to seek out specific market areas, rather than to try to compete on sector of the market which range from husiness, industrial and scientific applications. For example, Comshare a U.S. company bas actively decided to seek this route over the past three years and it has selected such areas as foreign exchange hanking, the provision of extensive computers services to both local and central government, as well as stock and inventory control for those carrying out manufacture. It is also starting to provide a new type of service to marketing managers.

Strong growth

In its 1979 annual report, Comshare attributed the growth of its turnover from \$2am to \$53m in one year to three fac-tors: strong internal growth due to its specialised computer services: the consolidation of its European division and acquisition of the tax processing husiness of another U.S. comnany, Digitax. Comshare wants to dominate

the particular sectors within which it has chosen to work and helieves that additional acquisitions of other companies within these sectors will help it achieve those ends However, such acquisitions are becoming a feature of the industry and will increasing he so over the next clients prefer to employ its packet switching network for reasons of reliability and

few years. National Westminster Bank owns Centrefile which deals with payrolls and all major banks run similar services at very competitive rates. Com-

puter Management Gruppen is another large bureau which deals with general accounting.

In the engineering field is Atkins on Line which was originally part of the Atkins onglacering consultancy but was subsequently taken over oy a U.S. company which was recently itself the subject of a conomy.

The importance of telecommunications for bureaux is that munications for bureaux is that to save considerably on their investment in private links while, at the same time, having access to a greater number of cities and the opportunity to attract more clients.

The demand for semi-conduc-

Nippon Electric bas almost

This is largely due to the four-year development programme pices of Japan's Ministry

Semicooductor manufacturers, such as Texas Instruments. The Japanese electronics Mostek. Intel, Motorola, AMD, National Semicooductors, Rockwell, AMI and Fairchild are insta a few of the U.S. companies in market as possible and is investing more than £150m in order to increase its output by 40 per cent. There is a general short-age of silicon chips at the moment and U.S. manufactorers are unable to meet the demand.

> completed its £50m investment ket programme which will increase all its overall production capacity for integrated circuits by 50 per cent. much of which is in the memory area. Fujitsu and Toshiba are investing £37m and £20m, respectively, while Hitachi's expansion will cost around £20m. Hitachl is committed to hrioging its 64k ran-dom access memory — confusingly, capable of storing more than 65,000 bits of data, due to the way in which memories have traditionally been designed -into production volumes by

which was run under the aus-

is so large and is valued at about 81on. More than half this total is attributed to random access memories. Semiconductor memories are divided into a hewildering variety, each being chosen for its particular revelence to a specific applica-

Random access memories, as already indicated, form one of the largest segmeots in the market and are manufactured by all the major semiconductor manufacturers. Random access memories—RAMs for short—are made in various sizes from 4k (where k. in this case, represents the number of 1,023 not 1,000) to 16k and eventually 64k will be available in productioo quantities.

Disadvantage

RAMs are divided into two distinct types — static and dynamic. In simple terms the the U.S. manufacturers' output ties than the static counter- programme for a machine tool. In the 1950s, when computers

parts. However, they suffer the disadvantage that they require special additional circultry to ensure than information stored within them is not lost within a few seconds. Nevertheless, these devices are extremely popular, especially for the larger memory systems, because the special "refresb" circuity then becomes a small proportion of the overall cost.

However, all RAMs made out cooventional technology have the unfortunate habit of forget-ting everything when the power switched off and so require additional back-up memory sys-tems should the power fail.

Manufacturers also make memory devices called "read-ooly memories" (or ROMs) which do not lose information when power is removed from the system. ROMs were for a long time the hasic components of micro-electronics computer hardware. They are used when difference between the two is the data to be stored is not that dynamic devices can be required to change — for However, semiconductor made more cheaply with the example, a list of parts or any are really the newcomers when are memories are a major part of ability to have greater capaci-standard list, a small computer it comes to computer memories. amo

The ROM is programmed dur-ing its period of manufacture, were used to retain information thereafter it cannot be changed. If you want to change your list or programme you have to buy a new ROM.

Though ROMs are rigid, they are cheap, fast in operation and have a very high storage capa-city. Already 128k devices are available when RAMs are only now reaching 64k.

The simplicity of the ROM and its inherent advantage of being able to store information over long periods has led to several types of "offspring" which come under the beading of programmable read-only memories. These memories, called PROMs, can be purchased uoprogrammed from semicon-ductor manufacturers; the user can put in his own pattern of data, instead of having to specify during manufacture of the device. Again, once programmed, the information is unalterable.

The next development in ROMs was the erasable memory which allowed the user various means to wipe the memory clean. These types of memory are normally found to have applications with the smaller types of computer systems while random access memories tend to be applied to large systems.

But semiconductor memories

were used to retain information methods ranged from punched paper tapes to electric vacuum tubes — valves — and a revolutionary device called the Williams Tube. However, magnetic forms of storage quickly became dominant and today they hold an important part of memory market.

Transfer To To To The Party In the State of the State of

Magnetic core memories were once used extensively in com-puters for storage of data, but their use declined in the tech-nology race to semiconductors, despite advances which have shrunk the size of magnetic core to a fraction of that a decade ago. Magnetic core memory consists of tiny ring magnets, threaded by control. wires which magnetise and demagnetise them, according to the pattern of ones and zeros which are to be stored. However, magnetic core memories were bulky, slow and expensive and are only used now for small numbers of applications today.

Several factors

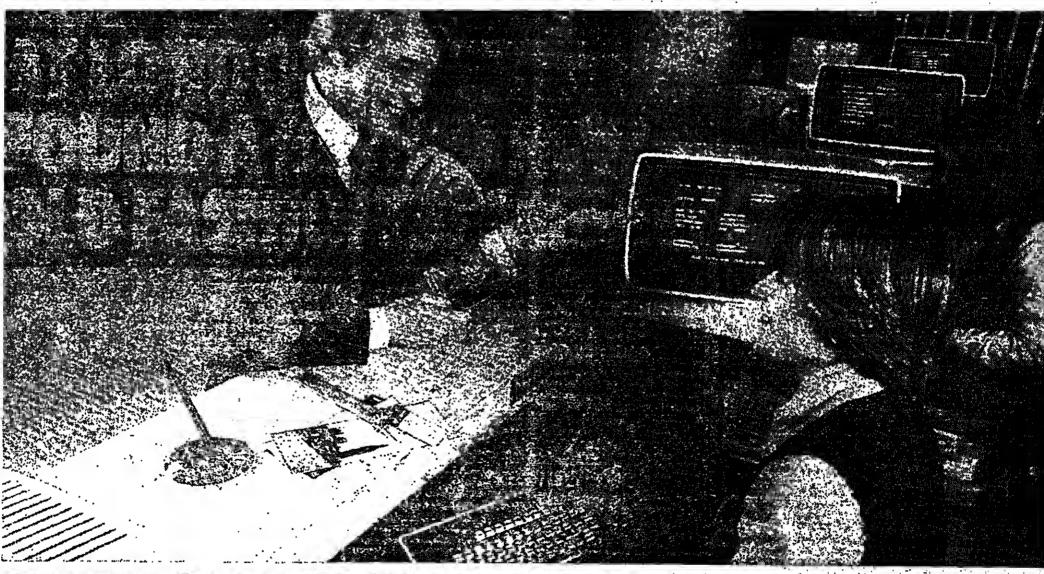
Other types of magnetic thinner version of an audio storage, such as tape drums and disc—are another relatively cheap way of computer information attack by semiconductors for tion storage. many years. Magnetic tape and fixed disk systems are usually associated with large mainframe computers and some They minicomputer systems. used for storing vast. amounts of information.

medium depends several factors such as the length of storage, how much data is to be stored security (especially in the case of power failure), cost and the speed of information retrieval. This is the reason why there are such diverse forms of storage, iocluding tape, cassettes, discs and drums. For example, for longterm stability and reliability, drum storage (achieved with cylindrical drums which revolve at very bigh speeds) are still used for large computing systems because they have ver low error rates, even though

they are expensive. Where smaller systems are involved, either cassette or floppy disks are commonly employed since they offer very economical solutions. There is very little difference between the cassette used in computing and those used for conventional andio recording. The major differences are in the elec-tronics which control the flow of information. Floppy disks -which looks like a much thinner version of an audio

tion storage.
Although the most exciting developments are taking place in the field of semiconductors, there is unlikely to be any dramatic change in the fortunes of other types of memories because of the varied tasks they

AT LONDON'S PENTA HOTELT FOUND A BRAND NEW WAY TO OLD FASHIONED SERVICE.



"Our problem was simple," says Charles Gorman, General Manager of the London Penta Hotel. "We wanted to improve the level of personal service we could offer our guests; but were prevented from doing so by the disproportionate amount of time our staff spent occupied with routine paperwork and administration. Clearly we had to find a way to free them of this burden."

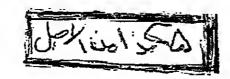
Charles Gorman and his colleagues had little doubt that the answer to their problem lay in some kind of specialised computer system. But finding the right one proved difficult.

"We examined many hotel computer packages in operation worldwide. But none of them seemed capable of catering exactly to our needs. And trankly their designers and manufacturers were not always enthusiastic when it came to discussing the kind of modifications and special facilities we knew we required. Finally, we discovered Marcol, a London software house, who, using Data General hardware, had developed a system that seems to us now to be one of the most successful hotel computer systems in the world today."

At the heart of Marcol's system - now installed in the Penta and known to its friends as CHAMPS-(Computerised Hotel Accounting and Management Processing System) lie two Data General Eclipse computers. Connected to these are a wide range of terminals (mostly visual display units) in various locations notably: front hall reception, cashier's office, Bureau de Change. Accounts Dept. and the switchboard. As soon as a guest enters the hotel their name and room number is keyed into the system so that thereafter, they can be located, serviced or billed with optimum efficiency and

control. Charles Gorman again: "Between them Marcol and Data: General have transformed the running of our hotel. Today we have a smooth controlled operation with maximum emphasis on service and cost control... with our staff free to do what they're meant to do – giving our guests the kind of old fashioned personal service they deserve."

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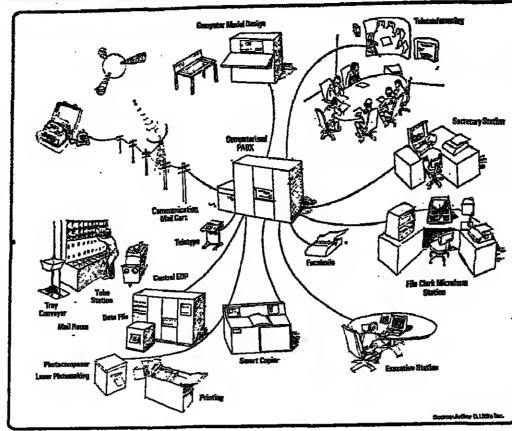
operation, This naw mini-computar is idaot

MOLECULAR 80

The computer for a new decade

THIS diagram gives an indication of "the office of the future" in a large company - in around 10 years' time. It is an idealised picture, since real office life will be much more untidy. But it depicts a trend, and shows the main communication lines between the equipment which will increasingly handle, evaluate and produce information.

By 1990, according to Arthur D. Little, the American consultancy, the larger office will have evolved into a system net-work that includes equip-ment at headquarters, a subset of equipment for the monufacturing plant, and a different subset for the sales offices, with each segment interconnected.



The next decade will bring radical changes

THE OFFICE OF THE FUTURE

THE PHRASE "office of the future" conjures up a slightly surreal image reminiscent of the sets from "2001—A space Odyssey." Gleaming electronic hardware emits a series of discreet hleeps and flashes as distant computers converse according to some inscrutably complex master programme, Clean-cut executives, their desks conspicuously free of paper, communicate decisions

at the press of a hutton on a desk-top console. An alternative, and perhaps

oo more far-fetched, scenario is that tha office as we know it will disappear altogether. Freed by advanced communications tech-nology of the need to congregate physically with his colleagues, the white-collar employee of the future will work from home, transacting husiness via a com-pact terminal installed in his study.

He will call np his files on a television screen linked to a data hank and dictate memos into a volce-sensitive machine. This will convert his message into digital code and transmit it instantaneously to its destina-tion. If he needs to confer with his colleagues, he can do so through a special telephone fitted with a video display which will enable them to see as well as speak to each other.

Sobering thought

Much of the technology needed to realise both visions data-processing within reach of is available, or soon will he. But an increasingly large number of it is a sobering antidote to such speculations to realise that, in machines are also falling in the UK at least, still only one price while gaining in power. in roughly every four offices has a photocopier, one in ten a data processor and one in 40 a word

Indeed, it was only about five years ago that sales of electric typewriters overtook those of nanual machines.

Nonatheless, a growing hand of companies believes that the next decade will see radical changes in the way in which offices are organised, as continn-ing rises in wage hills and other overheads and the falling cost of hardware enhance the appeal of automation.

A recent study by Arthur D. Little, the American consult-

GUY DE JONQUIERES

some time heen selling successfully a private automatic

hranch exchange. Now, through its interest in Satellite Busi-ness Systems (SBS), it is poised

to enter the large-scale com-

munications network business.

SBS, which is expected to

enter operations during the

sions to he beamed between ground stations. One of its major applications will be to

enable corporate executives in

in different parts of the globe to participate in multi-way con-

Initially, tha system is likely

to he expensiva, with ground

stations each costing about \$250,000 to Instal, and probably

land-based husiness communi-

cations system code-named X10.

active io penetrating IBM's European markets for office pro-

ducts, offering an expanding

range of electronic typewritars. The Italian company has also greatly strengthened its pre-

sence in the computer market recently by concluding agree-ments to distribute large IBM-

compatible mainframes made by

Fujitsu/Hitachi of Japan and medium-sized machinas manufactured by the U.S. company

Exxon is a powerful recent entrant into the field. It has spent more than \$100m equip-

spent more than \$100m equip-ping itself with the where-withsl to provide office of the future systems. Its interests in-cluda Zilog, a micro-electronics company, Vydec, a manufacturer of word-processors, Qwip, a pro-ducer of telephone facsimile equipment, and Delphi, which makes computars.

An agreement was reached

last year between Delphi and Nexos, the office equipment organisation set up by the

Nexos has acquired the UK manufacturing and European markating rights to the American company's Delta 2, an enor-

mously powerful computer designed to be the core of a

Nexos, which is also linked

with Logica, the British software house, and Muirhead, which

makes facsimile mschines, aims to provide integrated office

makes computars.

National Enterprise

fully-electronic office.

Competition

sharing basis.

U.S. salaries of office workers machinery, has also been shar-have increased at an annual pening its strategy in the com-rata of 7 per cent over the past munications field. It has for have increased at an annual rata of 7 per cent over the past five years. By contrast, the costs of communications equipment, computer logic and computer memory have been decreasing by 11 per cent, 25 per cent and 40 per cent, respec-tively. ADL forecasts that these economic forces will be a powerful factor behind the creation of a new market, which it expects to grow to \$12bn to \$15hn a year hy 1985 in the U.S.

The objective is an electronic office based on a marriage of the technologies of computers, telecommunications and office equipment. In its ultimate form, this vision foresees the virtual abolition of paper as a medium of communication in favour of complex, integrated information systems in which all text, data, graphic and voice communica-tions will be handled electronic-

It seems likely that some elements of this system will be implemented sooner than others. The advent of smaller and cheaper computers is bringing users, while word

It may be some time, though. hefore companies with substan-tial paper records find it nomic to switch over entirely to computer storage.

However, many of the competitors girding up to supply this market are convinced that the richest spoils will fall to those who can offer a complete range of equipment from which a customer can build up an integrated system over time. Predictably, the field is crowded with American entrants, with giants such as IBM, Xerox and even Exxon well-represented.

IBM, with its huge marketing Little, the American consult strength and its long experience ancy, pointed out that in the in both computers and office

GEC of Britain has comple mented its activities in comby purchasing A. B. Dick, the American office equipment com-pany, while in Germany Siemens is starting to market office products of its own.

ITT has a strong position in Europe as a major supplier of communications equipment to PTI's, largely through local sub-sidiaries. It recently acquired Qume, which makes word-processors, markets Qwip facsimile terminals in Europe and has heen aggresively selling PABX equipments.

next year or so, will permit wide-bandwidth voice transmis-Among the Enropear companies, Philips appears the closest to defining a coherent overall strategy towards the office of the future. It is strong in all the relevant technology and products and is understood to he on tha verge of an internal reorganisation to ensure that it exploits their development and marketing potential.

ICL. Honeywell and Burroughs have all been only the biggest companies will be able to afford it. But in time, expanding their office computer s facilities may he made availe to smaller users on a timering basis.

t is likely, however, to face
f competition from Xerox,
ch is developing a less future. SBS facilities may be made available to smaller users on a time-It is likely, however, to face

> Sperry-Univac, on the other hand, appears to be taking a more cautious approach and waiting for a clearer pattern of demand to emerge before declaring its intentions.

Powerful as IBM is, there are chinks in Its armour which Its competitors have not been slow to exploit. It is thought to have to explort. It is thought to have encountered some difficulty in developing its ink-jet printer and its office products division is still looking for a satisfactory successor to the famous "golf-ball" typewriter which revolutionized conviruing in the 1980tionised copy-typing in the 1960s. eventual users. Olivetti has heen particularly

It is possible that, without careful analysis of the complex forces which determine the pattern of office life, some of these systems will impose an unnatural and too rigid disciplina on the employees whom they are designed to

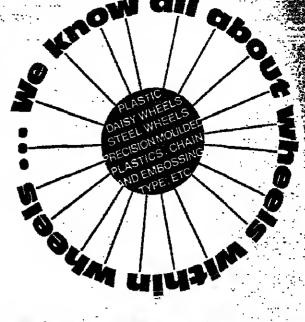
But with new entrants pouring in all the time, the market is certainly going to grow even more competitive. Those who delay for too long risk finding

Big European companies with diversified interests in elec-tronic and electrical manufacture are sharpening their strategy in the office market.

which is developing a less futur-istic, hut arguably more flexible. professional customers such as lawyers and doctors.

There may well be a case for adopting a prudent approach to the office of the future. So far, the market has been to a large extent technology-driven, and it has yet to he seen how closely some of the more ambitious projects for integrated systems correspond to the needs of their

it difficult to catch up.



Financial Times Monday March 3 1980

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systems io which voice com-munication will be particularly important. It is looking closely at technology which will enable computers both to respond to spoken commanda and to store information in the form Another British venture, with

Hunting Housa, Central Way,

which both the NEB and the Post Office are associated, is the Prestel viewdata service. This uses a television screen to display data transmitted on telephone lines from a central computer store. Aregon, an NEB auhsidiary, recently launched a Prestel office communications system which will allow even staff unfamiliar with computing to retrieve, feed in and edit information.

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Great rivalry between designers

THE COMPUTER and semi-basic component while MOS conductor industries share a uses the field effect transistor. common interest being depend in simple terms, this means dent upon each other for their that the bipolar circuits are mutual survival and growth. capable of faster speeds than inside a computer are bundreds MOS, while MOS is easier to of components with several make because it requires fewer different jobs to perform.

computer's memory, storing be packed into a given silicon information before and after chip and MOS consumes less power. they may be part of the sophistiprocessor the "brain" which carries out the computationsor they may he part of the circuitry between the computer and the outside world. For example, a computer may have to send instructions to operate a machine tool, take readings well suited for the interface devices which ensure that control signals to and from the computer to outside equipment are mutually understandable. from instruments, or simply read the characters being typed on a keyboard.

All these different requirements are met by integrated circuits which are manufactured using only two hasic semiconductor technologies and their derivatives. All integrated circuits - silicon chips - are built up like layers of a cake using processes of etching away areas of the silicon coip and adding various types of impurities to give the required electrical characteristics and patterns for each circuit. Each layer is an individual step in the manufactures dominated by the other. turing process and any reduction in the number of steps without tried to reduce its power conimpairing the circuit's performance saves money and time.

for making integrated circuits derivative called Integrated Inare called the Bipolar and the Metal Oxide Semi-conductor. The major differences lies in the basic elements from which the circuits are fabricated on

Bipolar technology uses the logic—ECL—to speed its opera-bipolar junction transistor as its tion even further.

manufacturing steps, is cheaper They may be part of the as a result, more transistors can

As a result, bipolar integrated cated logic which makes un the circuits are used for the highspeed logic required within the computer, and, because of various other characteristics, is well suited for the interface computer to outside equipment are mutually understandable.

MOS, on the other hand, is found in the computer's memory because it can be used for large memory arrays and also used to make micro-DIOCESSOIS.

Power consumption

There has also been great rivalry between designers for bipolar and MOS circuits as each bas tried to overcome the disadvantages of their nwn technologies so that they can compete more effectively in

So the bipolar technology sumption which resulted in a variant known as low-power The two main technologies Schottky TTL, while another jection Logic or 121 appeared to prove that bipolar could pack almost as many transistors in as small an area as MOS. At the same time it used another variant called Enotter coupled other look at the basic element

SEMICONDUCTORS

ELAINE WILLIAMS

MOS's answer to improve-ments in bipolar has been to increase the density of its circuits even more, which gives it an impressive—but not unassailable-position in highdensity circuits as well as trying to speed up its operation to rival bipolar.

When MOS was first used in the mid-1960s it was the positive version PMOS which was used. Then the negative version-NMOS-was adopted because this proved to operate at much faster speeds. A combination of the two called complementary MOS speeded up MOS even more and reduced the power consumption and also allowed the circuit density to

It has been the demands of the computer industry with the aims of making faster and more powerful computers which have put the pressure on semi-conductor manufacturers to increase the number of circuit elements on a single chip by reducing the size of individual elements. New variations in MOS and completely different technologies bave been bailed as major breakthroughs in building the high-density cir-cuits required for storing large amounts of digital information in tiny areas on a silicon chip.

Designers in MOS took an--the field effect transistorand decided that for high-

density memory applications in bubbles.
this could be replaced by some- This typ. thing simpler—tha charge tended to be used for mass read from the part of the coupled device. The charge storageof information to rival memory where a bubble is compled device was considered the standard large-capacity stored, the bubble is destroyed.

These are a pattern of con- of synthetic garnets to be preductors on the surface of the cise. chip which propels electric charge-repressing the binary data—through the material until it reaches its required destina-tion where it is stored. Simply stated, the CCD operates as an array of capacitors that pass. electric charge from one to another and as a memory this charge can be stored for up to

New applications

construction CCDs are very —the do cheap to fabricate and also cylinder capableof being made into very bubbles. high-density circuits. Also, their-method of construction means that CCDs bave other important applications entside the computer industry for light image sensing, and cameras for low light lavels have been made using them.

Unfortunately, CCDs appear. to bave been overtaken by a more promising technology called bubble memories which, surprisingly, is not based on any of the two basic technologies. This holds the bope of very high-speed density circuits for memory applications.

Bubble memories have developed very rapidly over the garnet where it remains until last year or so and now show the information is required to more promise than the rival change.

technology of charge coupled devices. Bubble memories are used to read information from being designed by companies this type of memory is based on such as Texas Instruments and the "magnetoresistance" effect. Rockwell in the U.S. Plessey in the UK spent much time and effort in research but recently decided to opt ont of the market. It was the only European company with an active interest

to be the most promising of memory systems of magnetic the technologies for mass drum, tape and disk. Bubble storage until it was ousted by memories are made out a magnetic material—special group netic material special group

> A thin transparent layer of garnet lying on a special supporting layer called the substrate is used for the memories. microscopically small areas called domains which each act as tiny individual magnets.

Under normal circumstances the domains have very irregular shapes but when a strong magnetic field is brought near them—the field usually being Because of its very simple supplied by a permanent magnet -the domains shrink into neat cylinder shapes which are called

> The thin film of garnet is divided up into definite geo-graphical locations so that the presence or absence of a bubble at a particular point represents a binary 1 or 0 which is used for all computer calculations. Any memory system must be able to generate the ones and zeros and allow the computer to read the information it has stored without the data being destroyed or distorted in the

netic domains—are created when a pulsed external magnetic field is applied to the chosen location within the

A special detector made of Permalloy has the property that its resistance changes when a bubble flows past it-so it is possible to differentiate tween a binary 1 or 0.

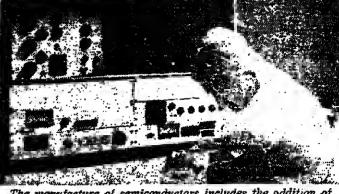
But every time the computer Therefore, to ensure that the memory is left as it was before its contents were read, it is arranged that the bubble divides into two. So, when one bubble is destroyed its twin remains preserved in the store.

High capacity

Bubble memory promises a storage capacity of up to 1bn bits per square inch of material. Both Rockwell and Texas Instruments have memories which can store 250,000 bits of information while Intel, has a Im bit device. But both TI and Rockell are unlikely to be far behind. It is possible that by the end of the 1990s the capacity on a standard-sized chip could reach a staggering 256m bits.

Also, because bubble memories store information magnetically, they do not lose information when the power is switched off. And they operate on very low power so can be operated from batteries, if required. At the moment bubble memorles are quite expensive compared used for memory storage but the price inevitably will fall. This is just a small example

of the types of technology which will be coming into common use in the 1980s to keep computer manufacture equipped with the means to ensure that future products are com-



The manufacture of semiconductors includes the addition of elements by ion implantation, as seen here at the new Horris plant in Florida, U.S.A.

CORPORATE INVESTMENTS IN U.S. SEMICONDUCTOR COMPANIES TO END

U.S. semiconductor company.	Corporate investor or acquirer	Acquirer's country
Advanced Micro Devices	Siemens	W. Germany
American Microsystems	Robert Bosch Borg Warner	W. Germany U.S.
Analog Devices	Standard Oil of Indiana	Ù.S.
Electronic Arrays	Nippon Electric	Japan
Exar	Toyo	Јарап
Fairchild Camera	Schlumberger	Netherlands Antilles
Frontier	Commodore International	Bahamas
Inmos	National Enterprise Board	UK
Interdesign	Ferranti .	UK
Intersil	Northern Telecom	Canada
Litronix	Stemens	W. Germany
Maruman IC	Maruman	Japan
Micropower Systems	Seiko	Japan
Monolithic Memories	Northern Telecom	Canada
MOS Technology	Commodore International	Babamas
Mostek	United Technologies	U.S.
Precision Monolithics	Bonrns	U.S.
SEMI, Inc.	General Tel. and Elec.	U.S.
Semtech	Signal Companies	U.S.
Signetics	Philips	Netherlands
	Electronic Engr. of Calif. Lucas Industries	U.S. UK
Solid State Scientific	VDO Adolf Schindling	W. Germany
Spectronics	Honeywell	U.S.
npertex	Investment group	Hong Kong
Synertek	Honeywell	U.S.
Unitrode :	Signal Companies	U.S.
Western Digital	Emerson Electric	U.S.
lilog	Exxon	U.S.
Squrce: Mo	organ Stanley Electronics Letter,	

Unions are less than optimistic

A RECENT British Government survey of the employment effects of micro-electronic tech-nology concluded: The overail employment effect is virtually impossible to guage However, past empirical work suggests that, in the long run, technical change has been beoe ficial to both output and employmeot.

This survey, from the Department of Employment in Decemher, was at pains to say that much of the alarm about mass unemployment from automation was based on wrong assumptions or showed an ignorance of ecocomic history.

But, forgetting the wilder predictions, it is quite apparent that even the sanest of com-mentators are far from sure that the effect will be beneficial once again. There is, of course, particular concero in the head offices of trade unions especially in Britain and in the rest of Western Europe:

Their worry is that the new technology, cheap and accessible as it is, will merely compound the problems faced by Western economies during the rest of this

In other words, aithough productivity improvements (of the kind technical innovation can yield; have traditionally been accompanied by rapid economic growth and an increase in employment, there is no certainty that the virtuous circle will continue.

British and European trade union leaders—one of whose functions it is to defend jobs at Government level-believe that in the coming years employers will barness microelectronics to save labour rather than increase output in a

Researchers at the European TUC, for instance, have said in a major review of the scene last November that new technology does not automatically increase demand for goods and create new job opportunitles for those displaced by it. In the EEC countries in general, between 1958 and 1967, gross domestic product grew on average by 4.5 per cent a year and employment hy 0.2 per cent a year. But since then, the picture has become less rosy.

West Germany

The ETUC cites West Germany as one example—a country where labour productivity rose 3.8 per cent a industry itself and telecomputer industry itself and telecommunications national product by only and maintenance end will contract by 1 per cent—But so did expand).

to 4.6 per cent.
Although the displacement
of workers will be particularly. matked in some sectors, the overall impact may be lost within the general problem. The effect might be measurable rather than significant—if there were the statistical means for measuring it.

But it is now generally recognised that the rate of adaptation to new techniques will be slower m some coun-

THE IMPACT ON EMPLOYMENT

Christian Tyler

tries worryingly slower—than similar inconclusive battle was predicted when the silicon chip fought at The Times and Sunday irst entered the political debate. That will tend to mitigate its effects.

At the same time, it is also accepted—not least by trade unionists themselves—that the consequences of not adapting could be far more serious for jobs than the displacement

Changes needed

Governments may be over-optimistic when they describe the microelectronic revolution as the engine of a new economic miracle for those countries, such as Britain, which are waning forces in world manufacturing. But it is probably true that unless those countries rapidly take up both the manufacture and the industrial application of silicon chips, they will lose out beavily both to the U.S. and Japan and cheap-labour countries of the Third World.

The forecasters are much more confident when it comes to assessing the way in which microelectronics will change the structure of employment. thus identifying broad areas where retraining would pay dividends or where Governments with positive labour market policies can usefully intervene.

Generally, the impact on manufacturing industry is expected to be less than in the service sector-especially office administration and the financial world. But within manufacturing, clearly the electronics industry itself will see the fastest changas.

So far, the net employment effect appears to have been Other areas where negative. significant changes are predicted are robotics, machine tools, goods handling. Countries slow to seize the new technology could suffer badly in these

sectors. The motor industry, according to one U.S. expert, could become the third largest user of silicon chips, after the computer

employment. The unemployment and the rose from 0.7 per cent in the motor electronics companies, with the possibility, as the unions see it, of European to the

companies losing to the Americans and the Japanese.

Typesetting and television assembly are two other processes where large employment effects are expected. In West effects are expected. In west Germany an estimated 35,000 typesetters jobs have already gone since 1972, and their union, IG Druck und Papier, recently fought a long strike over job security and earnings. A

fought at The Times and Sunday

The sheer number of components, and the number of man-bours needed to manufacture components are likely to fall dramatically. But, generally speaking, manufacturing pro cesses are not seen as the main area of job displacement, at least in the sbort term.

Times, of London.

It is in the service sector that there is likely to be both a large employment effect, and, possibly better prospects for job creation, despite the recent downturn in the rate of growth of clerical employment.

The European TUC expects the numbers employed in distribution, hotels and catering to rise during the 1980s after having stayed roughly constant in the past. Community and personal services, it estimates should continue to expand. But in these areas like transport, communications and finance where the impact of the technology will be great, the employment trend will be

Most of the trade union studies agree that women's job opportunities will be severely curtailed as word processors take over the more menial office tasks. At the same time, the increase in office could create more clerical and administrative posts that women could fill.

An example

In the UK, for instance manufacturing employment fell by over 8 par cent between 1971 and 1976, while employment in the services rose 10 per cent. The number of women clerical workers rose from 2.6m in 1968 to over 3m ten years later. But since then, the growth has been

slowing.
One clerical union bas estimated that the productivity of women who type can be doubled by word processors. That might yield a general productivity improvement in the clerical and administration area of 50 per cent. If only 20 per cent of British offices were to go over to word processors by 1983 that would mean the loss of 250,000 jobs, unless there was an increase in output.

The other group of workers to feel the pinch would be the aerious unemployment in EEC countries. Their lack of skill would make them particularly vulnerable, and some serious thinking about school and technical college or university curricula seems to be in order. In manufacturing industry, at least, the vacancies will be for the semi-skilled and the technician — skilled maintenance men could become increasingly A redundant

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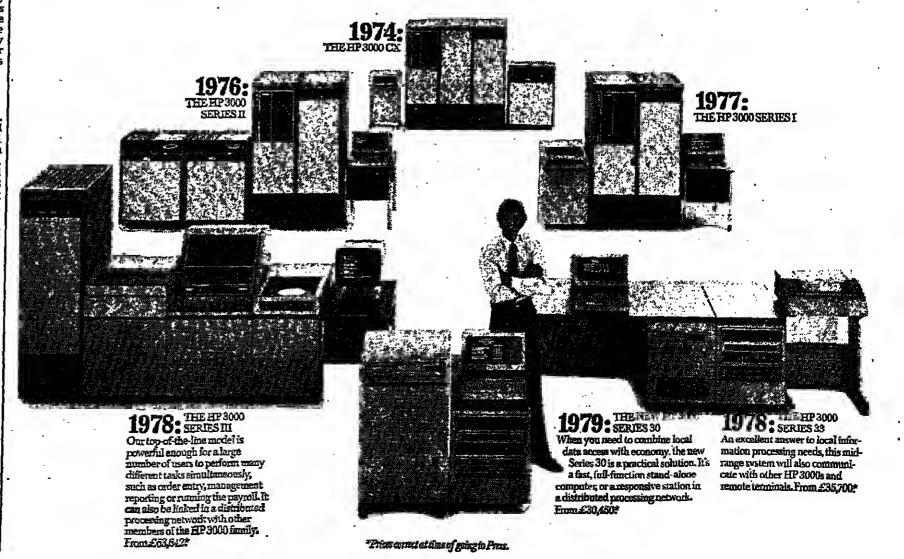
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Threat of staff shortages

"COMPUTER PEOPLE are supposed to he leaders of change." sighed Mr. George Penney, manager of careers projects at the National Computing Centre in Manchester. "But in this respect at least, they are just as conservative — or even as reactionary—as anybody else."

By "this respect" Mr. Penney and

By "this respect" Mr. Penney meant the selection of people colleagues at the National for training as computer profor training as computer pro-grammers and operators. The supply of these skilla has been defined specifications of a matter of concern for some time, and not only to the NCC. Computer pundits in the United States and the rest of Europe, as well as in the United Kingdom, have been sounding warnings for years that the number of people being trained is nowhere near enough to meet the demand. The need for such

appropriately skilled programmers and operators, most employers would prohably criticise their country's education excluded from consideration for the applicants was excluded from consideration for the straining places available to the straining places available.

people with well above the subjected to the centre's own average educational attainment, methods of selection.

Before heing even considered for admission to training as a programmer in the UK, for instance, a young man or woman is generally required to have a minimum of four case. woman is generally required to have a minimum of four pass whether the programmer was grades in the Ordinary-level regarded as good or poor at the exams of the General Certificate work. But those responsible for of Education, which are usually the Threshold scheme decided taken at the age of 16-plus. exams of the General Certificate

But Mr. Penney defined specifications educational success" as reliable measure of a person's ability to succeed as a computer

programmer or operator.
To test their doubt they started a special scheme of training in 1976 for these kinds of work, calling it the NCC Threshold Course. The scheme advertisements and local careers offices, to people aged 16-19 who were either unemployed or in a job with no grammers and operators, most employers would be to blame ployed or in a job with no career prospects.

criticise their country's education system for failing to
produce enough youngsters
adequately qualified for training.

This is hecause there is a
widespread assumption among
employers of all kinds that only
people with well above the
succided from consideration for
one of the training places available, on the grounds that he or
she had falled to gain passgrades in formal educational
examinations. Instead, whatever the applicants' previous
employers of all kinds that only
people with well above the
subjected to the centre's own

as measured by passes in public cxaminations, are capable of heing trained successfully.

These included four "paper" tests. Two examined the applicants' general-reasoning ability.

RECRUITMENT AND TRAINING

MICHAEL DIXON

at £5) is too detailed and

complex to be described fully here. But a fair idea of the

Threshold experiment's chal-lenge to the prevailing hellef that general educational qualifi-

Of these 100, no fewer than 35 would have heen excluded even from consideration for training hy the normal minimum criterion of four passament of Ordinary level or the

grades at Ordinary-level, or the equivalent of a grade-one ranking in the Certificate of Secondary Education—the "less academic" alternative exam at

16-plus.

If the number of O-levels, or

the equivalent, had heen raised to five, ahout 48 of the practising programmers would not have been allowed to start the training. Ony seven would have satisfied the Civil Service's

requirement for two passes at GCE Advanced level. None of

the 100, of course, was a

False notion

capability if they were to follow the course adequately. One of this pair of tests put

the candidates under pressure of time in working out the pro-blems which, although sounding ability to reason in terms of numbers and diagrams, all required some skill with words. The other of the pair involved no time-pressure or verbal rea-aoning, heing entirely pictorial

In torm.

The remaining pair of tests sounded ahilities which the previous study had shown to be associated with success as a programmer, although neither is evidantly singled out for development in the formal education system. The first ability is speed and accuracy ability is speed and accuracy in performing clerical tasks. The second is the ability to deal mentally with apatial problems. As a second stage in the process of selection, the candiprocess of selection, the candidates were interviewed according to a predetermined pattern by either senior consultants from the NCC or by college lecturers, all with experience in data-processing.

The interviewers' comments, along with the results in the four tests, were taken into

four tests, were taken into account when choosing from the 1,639 serious applicants, the whose subsequent progress was recently described in the centre's first report on the Threshold scheme

aken at the age of 16-plus. that all trainees would need a Staff Selection—a Volidation —for some years, that ability in Often, it is insisted that onecertain minimum reasoning Study, available from the NCC maths is not the most important

criterion in selecting data processing staff," says the report.

But there was one intriguing subsidiary discovery. Unlike Olevel maths, the equivalent "less academic" CSE grade one in mathematics did seem to mathematics did seem to believe will be as far-reaching believe will be as far-reaching introduction of self-But there was one intriguing

The report's own summing up of the centre's experience with the first 100 programmers is as

When we compare this with the standard of two Advanced levels demanded by most emcations are a precondition of levels discress, is provided by the first ployers 100 programmers who obtained their jobs directly from the others ployers (including national government) and with that of a degree demanded by many others (including some local authorities), we cannot but wonder what is the difference between the programming to be hetween the programming to he done in those organisations, and that to he done in the installa-tions employing the Threshold programmers."

But if the NCC's experiment has shown that supplies of much needed skilled computer staff need not, in practice, be limited by employers' hide-bound insistence on arhitrarily defined educational qualifications" for entry into training, few employers so far seem inclined to heed the message. It is the sight of, if anything, more employers raising tha entrance barrier to degree-level, that has driven Mr. Penney to the sad conclusion that computer people are as reactionary as anyone

Moreover, the widespread notion that a 16-plus pass in mathematics is a prerequisite for success in computer proreactionary, it appears plain that many potentially-able programmers and operators will go on heing wasted in dead-end johs or even unemployment as the threat of critical staff shortages continues to develop. The hlame, however, will helong not to the The report (Dota Processing hat with seemingly little effect however, will helong not to the taff Selection—a Volidation —for some years, that ability in education system, but to the

Trade poised for a revolution

as the introduction of selfservice in ahops in the 1950s and 1960s.

Already, the major super-market multiples are installing experimental laser - scanning electronic checkouts into several of their stores, with the hope that by the mid-1980s most of their large superstores will be operating equipment of this

Although the initial invest-ment costs will he substantial— Tesco alone is planning to spend up to £90m on new electronic checkouts — retailers helieve that the greater stock control and improved lahour productivity will he one of the key ways in which rapidly rising costs throughout the decade will he kept under control.

While the computer giants IBM and NCR seem likely to dominate the markat for the most sophisticated of the new systems, research is already heing carried out for the possible next generation of retail technology.

There are, however, basically three levels of sophistication at present in the new computerised electronic systems available to

retailers.

First, thare are the electronic units that perform almost exactly the same work as the electronic that the major superfacturer has simply replaced the tronic technology. Prices, there-

ticated level, are the so-called "stand alone data capture units." These perform all the normal functions of a cash register, but also record information about sales on an internal magnetic tape cassette which can be removed at the end of each day — or once a week — and taken away for computer processing.

Laser-scanning

Third, at the top end of the market, are the fully computercontrolled systems which incor-

porate laser-scanning. depends on how fast Britain's manufacturers are willing to print the special bar-codes on their products. Each grocery or non-food item sold in a modern supermarket will have to have its own unique 13-digit number which is translated into a series of short lines, or hars,

of varying thickness. Numbers for each product are allocated by the trade-sponsored Article Number Association. which has some 10hn numbers available in its data hanks. At the cash desk, the cashier

passes each item over a low-power laser-scanner huilt into the checkout which reads the transmits the

RETAILING

DAVID CHURCHILL

information to an in-store com-puter linking all checkouts. The current price of the item in the computer to the checkout where it, and a description of the item, appears on a visual display panel next to the cash time and location of goods

Simultaneously, the information is listed automatically on the till receipt, which prints both the name of the item and the price and thus enables the shopper to ace exactly what each item cost. This process takes a fraction of a second and, because the cashier is not manually keying in prices, the whole checkout operation abould he hoth faster and more than a traditional accurate

Optimistic

Not surprisingly, therefore, retailers expect shoppers to accept the system with enthusiasm, even though aome

electro-mechanical units they markets are devoting consider-are due to replace. The manuable management time and are willing to apend up to £100,000 internal, electro-mechanical per store in capital outlay. The components with modern electrosason, quite simply, is that supermarkets will have access fore, can vary enormously to an unprecedented degree of according to whether the unit accurate and fast information accurate and fast information

is needed to serve only a new about time.

stand np to the pounding received at a busy supermarket may carry at least 10,000 different grocery items and during the control of the control husy periods whole shelves of the most popular products can be emptied within hours. The problems of ensuring that sufficient stocks are avallable-and keeping track of what happens to stocks within the store—probably represents the biggest headache for supermarket management. Uotil now, physical counting of tins has been the most effective method,

even if it is the slowest. The laser-scanning system, however, provides the means for instant stock control. Goods brought into the store are orate laser-scanning.

The success of laser-scanning scanned on arrival and the information recorded in the in-

When the goods are scanned at the checkout, the computer automatically registers the stock depletion. The computer is thus able to alert store management to stock shortages and analysis of the data would enable the eyclical fluctuations Eventually, it is suggested that stock re-ordering could even he handled directly from the store computer to the company's depot computer and from there

to the manufacturers: The existence of a compre-The existence of a compre- the retailer and can be tailored hensive stock control system according to the size and that can be achieved by laser-

seanning also has the benefit of reducing the level of employee theft. Experience in the U.S. that store is then fed back by has shown that not only does atolen.

Labour costs will also be reduced by cutting the number staff needed for such jobs as individually price labelling every item in the store, hecause the bar code will already have heen printed on to the packet by the manufacturer.

Key Markets became the first supermarket group to launch an operation laser-scanning system in the UK, when the group installed one at its super-store in Spalding in Lincoln-ahire, last October. Inter-national Stores and J. Sainsbury have also just launched their trial systems, while Tesco and others are on the verge of doing so. In the U.S. and Europe, however, such systems have already been in operation

Aithough no accurate quantification of the financial savings from the introduction of new laser-scanning checkouts is possible until the Key Markets and other systems are in full operation, some attempts have heen made in the U.S. A study by the McKinsey management consultants estimated that a supermarket, with weekly sales of 645 000 could expect to make of £45,000, could expect to make "hard" savings—such as reduced labour costs from the elimination of price marking—of 0.3 per cent of sales a week

Stock control

"Soft" savings, such as better stock control, could mean a 1.15 per cent of sales saving after costs, although it is obviously more difficult to quantify such savings. Other estimates, bowever, suggest that these figures may be on the conservative side.

In the non food retailing sector, a number of major store groups are planning the totroduction of republishered elec-

duction of sophisticated elec-tronic checkouts. British Home Stores, for example, last year placed an order for 2,000 IBM electronic checkouts following the success of a trial system at BHS's Wood Green store, in north London. The introduction of this new equipment in BHS was described by its chairfuture development of the

The John Lewis department store is another major retailer which has accepted sophisti-

IBM. NCR and other manufacturers have special " packages"

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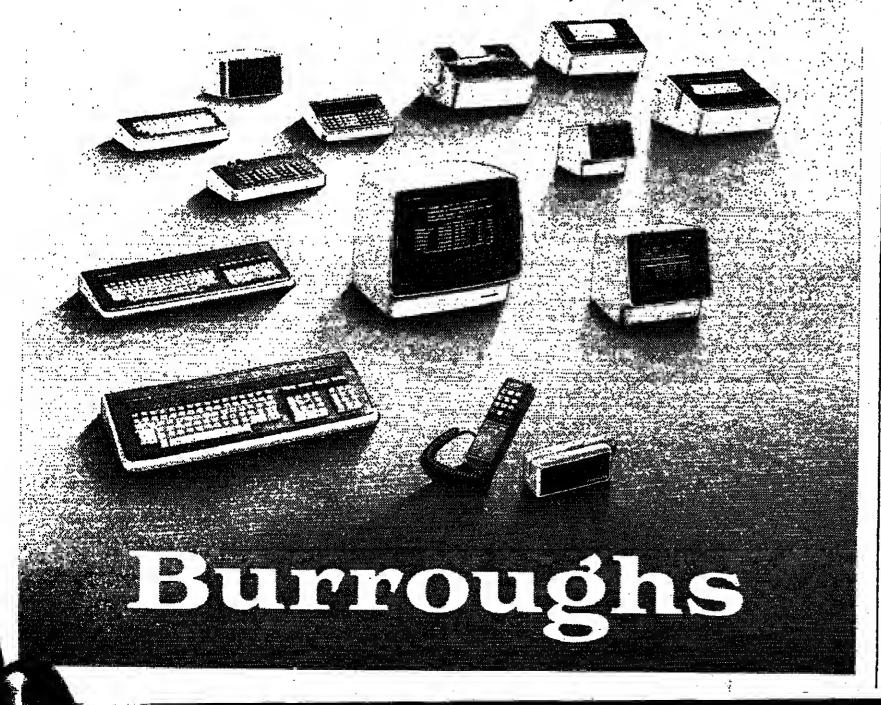
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Leasing companies under pressure

EARLIER THIS year Inter-national Businesa Machines in the U.S. blamed its deteriorating results on the volume of customers who were switching from outright purchase of computers to lease transactions as they await further developments of IBM's new and more powerful generation of com-

For the independent leasing companies this should bave seen the cue for glad rejoicing. But many companies are still feeling the backwash from the record breaking losses of £156m. at the last count, which Lloyd's of London, the insurance market, is facing from its involvement

Last year was not a good year the computer leasing industry in the UK. Bad investment decisions taken by some companies, combined with new product announcements by IBM threw the industry out of

This was exemplified by the rohlems experienced by

Moat computers are leased under an operating lease arrangement. An operating lease is a service providmed on equipment where there is an estahlished leasing and second-hand market. It may be attractive when a company requires a machine for a relatively short period hecause of the antici-pated development of mora

FINANCE

JOHN MOORE

advanced machinery.

The computer leasing concern arranges for a lessor to participate in the leasing of computers or can deal in and lease equipment itself. The lessor collects a payment from each lessee and the sum total of all of the premiums collected should be sufficient to cover the cost of the losses arising from the unrecovered value of ohselete machines

In the mid to late seventies computer leasing companies found a way in which to cover themselves against the potential ohsolescence of the computers. Lloyd'a offered a policy which gave cover on the difference hetween the monthly rentals and lower payments should a laase be terminated and the computer leased again for lesa

According to United Leasing, a leading UK computer leasing company, the Lloyd's policy began to go wrong when other leasing companies who had previously relied on equity finance to fund residual value shortfalls (and whom in most cases fully.

come to the limit of their investments in IBM'se 370 aeries computers) were offered another opportunity of equity finance without incurring any appreci-

The policy effectively gave the computer leasing companies additional collateral to write huge amounts of business which they had previously declined to

participate in. It allowed policyholders to assume reaidual values on computers which were wholly un-realistic given the potential rapid change of computer tech-

nology The IBM announced its new ranges together with a price cut the claims—over 14,000 of—

them—poured into Lloyd's. Before the claims-mainly from the U.S.-hit Lloyd's the computer leasing concerns using the policy had had a field day. Busines which was patently imprudent was concluded, for with the heoefit of the Lloyd's policy

rates could be undercut. Itel Corporation of the U.S. the troubled leasing concern, is expected to produce around \$200m of claims for the Lloyd's market although a deal involving the transfer of cash and assets to Lloyd's could reduce the final total.

Meanwhile the rapid rate of computer technology—and the Lloyd's experience—has concentrated the minds of potential independent lessors

NEVER BEFORE have the formerly open to A-level school- a certificate awarded in only a prospects of the nation's young leavers, and so on. As student single subject, although most compulsory schooling.

Success, usually equated with pass-grades in at least five subjects at this level is increasingly such as the Advanced levels of other educational issue arouses universities' and polytechnics' strated last week by the interest degree exams which lie three in the Government's proposed or four years beyond. Higher changes to the 16-plus exams in certificates such as two A-level passes or a degree are increas-ingly required by professional bodies and employing organisa-tions for entry to well-regarded

Two developments probably underlie the growing use of essentially academic exams as the prime means of selecting people for jobs, few of which require academic skills.

One is the delegation of apecialist personnel departments. Wisbing to avoid the expense of applying their own procedures of selection to large numbers of job applicants, these departments find bureaucratic rules based on examination results a handy device for swiftly reducing initial applications to a con-

But the proportion of people available for recruitment at 16and 18-plus has been reduced by the other development—the expansion of student capacity in universities, polytechnics and colleges. The general response of personnel departments has heen to raise their educational "cut-offs" accordingly, recruit- the preceding School Certificate of grade 1 is viewed (although notionally acknowledge above. What the Government pro- assumptions underlying the tion of the statistical rules is and only graduates for posts exam. O levels may be sat and not by many employers) as average ability in the subject poses to do six years hence is process of examining, of which to devalue the national career-

people heen more dependent on capacity grew, colleges also took candidates sit five subjects. their success or failure in public over much of the work training examinations. Of these the examinations. Of these, the concerns, and since collegea fundamental test is taken by the require success at 16-plns for great majority of pupils at the entry to their courses, this cutage of 16-plus, when they reach off has been increasingly used the end of the 11-year period of in determining the entry to skilled jobs at the craftsman ievel.

By thus making examination passes the national careerchanges to the 16-plus exams in England and Wales. While using the currency, however, and generally knowing the "job-exchange rate" of the different pass grades, the public at large has little understanding of the workings of the examination system or of the assumptions on which its gradings are based.

Diverse

The exchange-rate effects of the proposed change at 16-plus, for example, are fairly clear. At present there are two kinds of examination at this stage.

One is the Ordinary levels of GCE, introduced in 1951, and rooted in examinations devised hy Oxford and Cambridge Universities in 1858. These original tests were intended as a check on private schools, many of which, being free from inspection, charged heavily for a poor education.

well as Advanced) levels in a per cent of the way down.
wide variety of subjects. Unlike Accordingly, CSE's top award-

Up to 1974 candidates were awarded one of three grades of pass—A. B and C—or a fail. But the then prevailing educational belief was that, while some 16-year-olds and by implication their teachers failed to come up to standard, it was had for them to have the fact officially registered. So in 1975 grades D and E were added and required for entry to training currency, employers have led bave since been awarded along for skilled work of most kinds. parents to attribute over- with certificates to virtually all Sucress at 16-plus also opens whelming importance to the candidates who previously would the path to higher examinations public examinations. Indeed, no have failed. Employers, however, have generally continued the General Certificate of Educa- such strong and widespread to regard grades A-C as passes, tion taken at 18-plus, and the public concern—as was demonard the rest as falls.

Being descended from examinations instituted in days when only a minority of children received secondary schooling; Ordinary levels were designed on the assumption that they most academically able 20 to 25 per cent of pupils in the appropriate age range. But after 1945, when secondary schooling became compulsory for all fession decided that there was also need for a 16-plus exam for pupils of rather lower levels of academic aptitude.

The result was the second existing exam at this level—the Certificate of Secondary Educa-tion, begun in 1965 and administered by 13 regional boards. The CSE's design assumes that it will not be entered by pupils capable of gaining the two higher "pass grades"—A and B—in Ordinary levels, nor by the least academically able 40 per cent of the nation's 16-year-olds. It is intended therefore for children ranking from about There are eight GCE examin- 20 per cent of the way down the ing boards, each setting and full range of academic ability controlling its own Ordinary (as in the relevant age group, to 60

castings), the frequent "shop-ping around" for lower prices,

poor quality drawings, maintain-

ing small sometimes even zero

Mock Ordinary level exams at a comprehensive school.

equivalent to pass-grade C in O levels. The most important just below average, theoretical point in the CSE. The grade 6 sin hierarchy of awards, bowever, CSE has never received. is the borderline between grades 4 and 5. This line is assumed to divide candidates the average for the relevant age papers was their name, progroup as a whole, from those in the helow-average half. Thus CSE grades 2 to 4 although render themselves unidentifi-helow an Ordinary-level pass, able.

Until this is forth-

coming the long-run rationalisa-tion of that sector should be

allowed to continue uninter-

rupted under the pressure of

National Institute of Economic

The merits of

Sir.—Poor Mr. Jackson (February 28) seems to tbink

our society is in danger of collapse if supermarkets start

What about the other side of the "credit" argument? Most

to pay such things as rates in

advance. Most bousekeeping is paid in cash in advance of

And think of the advantage to the retailer! If it catches on no

looger will we need armoured

cars to baul great mountains of

lolly from shop to bank tempting

the thugs.

Why this attack on the friendly bank manager? Mine is

extremely cautious with my money let alone his. He won't

let me buy options. When I sell

shares be collects the money on

the dot on account day but

refuses to pay for my purchases

until physical delivery.

No. Mr. Jackson, the world

isn't going to end tomorrow. You've been believing too many

oewspaper reports.

of error

Buman Relations

£3bn margin

From the Director, Centre for Decision Mahing Studies, Tavistock Institute of

Sir, - Your correspondents

take up the centre position of the front page on February 28

to report on the Chancellor of

the Exchequer's decision process

for the coming Budget. The

question centres on the problem

of achieving his aim of a public

sector borrowing requirement of £8bn. Later in the report they

say that this figure "is subject to an average margin of error

of nearly £3bn "! This figure is

surely a totally unacceptable margin for guiding any sensible decision process, particularly in this highly sensitive area affect-

ing the majority of the working

a target figure stuck in quick

P. A. Kreamer.

39, Bcll Lane.

Windsor.

credit cards

From Mr. P. Krcomer

accepting credit cards.

market forces.

(Dr.) D. Hitchens.

and Social Research.

Smith Square, SW1.

2. Deon Trench Street.

concerned. Grade 5 denotes The grade 6 signifies that CSE has never recognised the concept of failure. Legend has it that this grade would be awarded to candidates even if whose academic ability is above all they wrote on their test

vided they did not make so

many spelling mistakes as to

CSE into an as yet unnamed ignorant. single exam system for entry by the most academically able 60 per cent of the 16-plus age group. The plan is to cut the present 30,000 different examination syllahuses severely, curtailing their variety in line with the new policy of concentrating all state schools' teaching around a "national framework" of basic subjects,

more compact coherent range of syllabuses will be designed in consultation with the eight GCE and 13 CSE hoards, which the Government hopes will also agree to merge into about five joint bodies. Each of these would control its own version of the replacement exam, with board-members from present GCE sector retaining responsibility for the top three of a total of seven grades.

In every feasible subject, there would be at least one paper to be taken by all the entrants. But other papers would be set to cater for different levels of ability, and only candidates who chose the bardest of the papers would be eligible for the highest grades.

The first three awardsgrades 1, 2 and 3—would bave the same exchange-rate value as, respectively, A at Ordinary level; B at O level; and C at O level compled with grade 1 of CSE. The new examination's grades 4, 5, and 6 would be equivalent to CSE's "above-average" awards of 2, 3, and 4. The replacement exam's seventh grade would compare with the "just-below-average" grade 5 of CSE: Apart from the reassumed that the least numbering therefore there academically able 40 per cent numbering, therefore, there would be virtually no change in the publicly visible exchange at all, rates of the 16-plus gradings.

ates of the 16-plus gradings.

Given the entry of children below the inteoded levels of attempted, however, is in the ability, the effect of the applica-

possibility of failure. Its absence, coupled with the

availability of the "easy" CSE, can produce negative results. Rather than push children who although capable of Ordinary levels are lazy, teachers have often let them be dragged down by their lethargy into mediocre grades of CSE. Moreover, since a certificate is sure to he awarded to every candidate in O levels as well as CSE, schools bave entered for either examination many children helow the level of academic ability for which the examination was designed.

At this point comes into play the method by which, in most mass-entry subjects, the different grades are awarded. This is not done by checking each paper against detailed criteria denoting different degrees of mastery of the subject. Instead, the candidates are ranked according to the scores put on their exam papers by the markers and the ranking is then split into pre-determined percentage bands, each representing a different grade.

Devalued

In Ordinary levels the three pass-grades seem to be awarded to between 55 and 70 per cent of the entry. The CSE "aboveaverage" grades of 4 upwards are awarded to five out of every six candidates because it is of the age-group do not enter

merge Ordinary levels and the general public seems largely currency. This probably ex-into an as yet unnamed ignorant. plains why, although the number of examination sucproposed examination's lack of cesses has been increasing, a safety net equivalent to CSE employers have been complaingrade 6. This means that the Government wants to restore the possibility of failure

It is to halt this devaluation that the Government is attempting the most difficult of its changes at 16-plus. While the statistical "norm-referencing" device will still be used, the examining hoards will he asked to make the examination grades partly dependent on candidates showing some specific levels of knowledge and skill in the subject concerned. As a result of the change, therefore, schools would know that entrants would not gain a decent grade or even a pass unless they had been taught to a particular standard.

In short, the new 16-plus is intended as a more definite test of the abilities, not only of school-children, but also of their teachers.

The crucial question here is to what extent the current school-teaching force in England and Wales is up to the intended test. At present, since the re-sults of the examinations are primarily determined by bow many children are entered, the answer simply cannot he known. But the widespread complaints by employers that 16-year-olds' standards have fallen, hardly encourage an optimistic fore-

cast. with its proposed change, the replacement examination might therefore expose severe flaws in the quality of the teaching force. These would surely call for urgent attention to teachertraining, which in turn would demand increased public spend-ing. But that would doubtless be preferable to continuing present levels of expenditure in blissful ignorance of what value, if any, the nation's fundamental

Letters to the Editor

Facts about steel

From Mr. G. Honsard

Sir,—In your leader "The facts about steel," (February 11), you state that British Steel Corporation's "present desperate condition can only be cured by an attack on overmanning and loefficient working practices." In other words, an outbreak labour productivity is all that ESC needs in order to at least From Mr. R. Capper break even. In this, your leader British Press, the National Economic Development Office, Sir Keith Joseph and BSC's top managers, though not with Mr. Bill Sirs. With the greatest, of respect, it seems to me that "the fundamental facts at the hottom of the dispute" have cluded your leader writer, to say nothing of the others.

My analysis of BSC's performance is sharply at variance with the picture presented by the news media: I find that: mar-ket forces, and BSC's response to them, are the root cause of low and still declining perform-ance: labour productivity is symptom rather than cause, an inadequate measure of overall performance, and not a key issue: and resources are being managed in such a way as to lock up excessive amounts of capital. Significant reductions in working capital are both possible and desirable and could be used to fund forthcoming higher unit labour costs and redundancies.

expenditure materials, energy and services— hut not labour—is at a considerably bigher rate than that of true Common Market. several major competitors in Europe, and has increased dramatically since 1975. But the increase has not been recovered in prices. It follows that BSC adds considerably less value than these competitors. Moreover, the amount of value added by BSC has fallen just as dramatically as the rise in expenditure on materials, energy Losses in each of the four years 1976-79 have been of the

same order of magnitude as the increases in these expenditures, and hence the decreases in added value. This relationship between costs, prices and added value is far and away the most economic performance. Labour costs in terms of sales

have been relatively stable since 1973, with the exception of 1976 when there was an up-surge, and compare favourably with those of most European producers. In terms of added value, there have been sharp increases in labour costs and decreases in labour productivity. These however, are due to market forces which have caused added value to decline. An attack on overmanning in

1979, with the object of breaking even, would have entailed the sacking of 64,000 people, with-out taking redundancy pay-ments into account. What this would have done to output and

sales is anybody's guess.

By international standards.

BSC turns over its assets very slowly, and uses excessive capital, as the table shows:

Surely, what is at issue at BSC Specification relating to iron answer to the question of how is nothing less than corporate productivity and the role played by market forces. Analysis, diagnosis and comment which gnores this is almost certain to he wide of the mark. Gerald Hansard.

65, Linton Crescent, Leeds.

Scotch, beer and wine

Sir .- The victory for fair play (February 28), against the French who currently tax French who currently tax it higher than their home produced brandy is extremely welcome, though it is doubtful if the French will comply with the ruling.

What is not so satisfactory is the judgment, deferred until the end of the year, concerning our own practice of taxing wine some six times greater than beer on a volume basis or some three times greater on an alcohol content basis.

No one should question the need for Government to raise revenue hut to impose discriminatory duties is to influence choice of the purchasing public. It also makes the wines at the lower end of the market extremely "had buys" because of the high duty content in the bottle compared with quality

Until reason prevails and a common duty structure, based npon the alcoholic content of ale drinks, is established in this country and also through-out the EEC there can be no In case I should be accused of

bias I write as a producer of both English hops and wine. R. M. O. Capper The Stocks Form, Sucktey, Worcestershire.

Small craft foundries

From Mr. F. Thompson

Sir.-The run down of the number of iron foundries which has taken place over the last 20 or 30 years has not only had the effect on the foundry industry with which we are all too familiar but has also produced a disturbing unhealthy state of affairs among purchasers of iron castings. All buyers of small quantities of castings have been trading in a buyers' market for this length of time; some will never have known anything different and the prob-lems involved on the part of foundries in dealing with the attitudes and practices which this has cultivated will resnain with the very small foundry for, believe, some considerable time after the supply/demand equation has been brought back

into halance. I suppose any foundry familiar with the widespread lack of knowledge of casting design on the part of users, the appalling technical ignorance (in 30 years I have never come across a buyer who has fully understood the British Standard

Per 100 units of total revenue Working Total Debtors capital . 15 24 11 10 in BSCs case, a reduction in working capital to 10 units is equivalent to a reduction of £172m in 1979.

stocks of regularly-used castlngs, excessive delays in settling accounts and so on and above all this the omniscient attitude taken by a buyer when problems arise as they must and do because of one or more characteristics such as these. It must be difficult enough for

a larger foundry to deal with. for example, a dispute with a customer centering round a when the small print of the order relating to it is examined carefully, should bave been made to a yard-of-rope-no-longer-than-two-feet type of specification but a small foundry simply has no option but to accept the buyer's decision in such a dispute whether just or not; it is too small to have any "clout" and any sum of money of us receive our salaries a involved (in rejection of a month in arrears while having batch of castings say) is more than likely to be too small to warrant taking legal advice. We vet as best we can the

competence and integrity of every potential customer but now and again we catch a crab and this invariably costs us dear in the end. And yet this is a gauntlet we are compelled to run hecause to survive it is essential that we take on new customers to replace those who go out of business or whose emand falls.

Maybe if and when a sellers' market develops huyers will eventually learn to deal on a fair footing with very small found-ries but how long will this take and what can a very small foundry do about what is vir-tually a might-is-right situation in the meantime?

F. Thompson, Leach and Thompson Chapel Foundry, Reighley, Yorks.

What capacity is needed? From Dr. D. Hitchens

Sir,-Four measures are sug-

gested hy NEDO to shore up lame ducks in the craft foundry sector—a capital loan scheme, extension of the carry-back period for tax-rebates, relaxation of environmental control legislation and the "co-ordination" of foundry prices. Mr. Kilpatrick, chairman of the , has been pressing most for his capital loan scheme (February 7, 14, 22) which he says has the magical property "Its monetary cost to the Exchequer would be nil, its real cost peannts."

The trick is achieved if only those foundries that were efficient received the grants
(because they would forego the
capital allowance which they
would otherwise offset against
gins of error of 2-5 per cent are tax). The flaw in the argument often admitted, for instance in is that cut-price investment social surveys, but your corres-would necessarily be open to all pondents' admission suggests an foundries which were abia to error that could exceed 35 per put up three-fifths of the initial cent. One is left breathless at cost of the investment. If the the thought that the Governfoundry was subsequently unment's aim to achieve a PSBR of profitable the full cost of the ESbn involves policies that affect loan would fall on the tax- the population's bealth, safety payer. As the report recognises and employment opportunities, the scheme "has the advanto mention only some of the tage that the loan is paid back serious social consequences of in depreciating currency" "out the decision process leading to

of profits."

Before any proposal for a subsidy of this kind is given (Dr.) Frank A. Heller. serious consideration NEDO The Tavistock Centre. must provide a satisfactory Belsize Lane, NW3

UK: Sir Derek Ezra, National Coal Board chairman, speaks at Coal Industry Society lunch, much craft foundry capacity we need, and why it should be pro-Gordon

Richardsoo. Governor of the Bank of England, presents annual prizes of London Chamber of Commerce, Mansion Nominations close in Parlia-mentary by-electico, Southend.

Police application to cancel Victoria Sporting Club gaming licence resumes, Caxton Hall.

Consumers Association launch 1980 Good Food Gulde. Leyland launch new truck

Today's Events

The Queen and Prince Philip visit Daily Mail Ideal Home Exhibition, Earl's Court. National Mall Order Merchao-dise Show, Royal Horticultural Halls (until March 6).

Overseas: Financial Times', two-day conference opens on the world motor lodostry. Geneva. Mr. Pierre Trudeau sworn in as Canadian Prime Minister, Ottawa.

President Valery Giscard d'Estaing of France in Bahrain at start of tour of Gulf States.

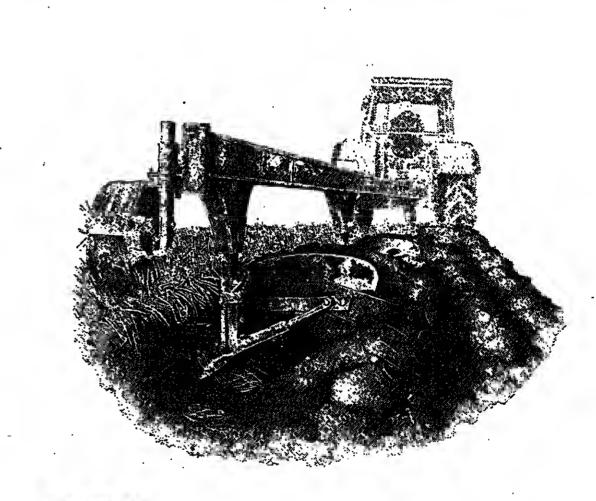
EEC Agriculture Council starts two-day meeting, Brussels. EEC Fisheries Council meets, Brussels. PARLIAMENTARY BUSINESS House of Commons: Companies Bill, remaining stages, Road

Traffic Accidents (Payments for Treatment) (England and Wales) Order. House of Lords: British Aerospace Bill, second reading, Competition Bill, report. Select Committees: Home dividends:
Affairs. Subject: Deaths io (Wallsend).

ciation of Police Officers, Metropolitao Police, Police Superintendents' Association.
Room S. 4.30 pm. Public
Accouots. Subject: Scottish
Development Ageocy Accounts 1977-78, 1976-79, Witnesses: Scottish Development Scottish Economic Agency, Planning Department. Room 16, 5,15 pm. COMPANY MEETINGS COMPANY RESULTS Final divideods: Blagden and Noakes Holdings. George Ewer. Fisons. Royal Insurance. Interim

Victor Products

career-currency represents. police custody. Witnesses: Asso-



Who on earth are Steetley?

One of Britain's top hundred companies. Steetley's international operations network is vitally important to agriculture and manufacturing industry alike.

To help in maintaining agricultural productivity we supply a wide range of minerals and speciality chemicals whilst Steetley minerals and bricks are used in the construction industry as well as in the manufacture of high quality metals.

But this is just part of the story Our huge mineral-based chemical and materials supply operation is also essential to the success of many other industries - including ceramics, oil, glass, fabrics and plastics.



The Steetley Company Limited, Gateford Hill, Worksop, Nottinghamshire S81 8AP, England.

MR. TONY HOLLAND, chairman of Lincroft Kilgour, the cloth merchanting and menswear manufacturing group, points out in the annual report that the whole of the textile industry is in a state of recession but aays nevertheless, "these downturns are cyclical and traditional and both divisiona of the group arc well used to coping with them by virtue of their flexibility.

The cloth merchanting division is fortunate to have its sales well apread around the world. although the present decline in sales to the Far East is a matter of concern, Mr. Holland adds.

The first weeks of the new financial year started slowly for the menswear manufacturing division, but in recent weeks a higher level of sales and produc-tion has been achieved. However, the well-heing of this division essentially depends on its major customers not increasing the percentage of imports of products similar to those made by the

For the year ended September 30, 1979, group pre-tax profits were down from £875,170 to £434,696 oo turnover of £14.47m against £13.57m. Trading profit was £540,928 (£961,2311 with cloth merchanting contributing £439,552 (£470,324) and menswear manufacturing, £101,376

BOARD MEETINGS

The following companies have notified The following companies have notified dates of Soard meetings to the Stock Exchange. Such meetings are usually hold for the purpose of considering dividends. Official indications are not available as to whether dividends are interims or finals and the sub-divisions shown below are based mainly on last year's immetable.

TODAY

Interims—Beredin Products (Wallsend). Finals—Blagdon and Noakes, George Ewer, Fisons, Investment Trust of Guernsey, Isle of Man Enterprises, FUTURE DATES

FOI ONE MAILE	
Interims—	
A.A.H	Mer.
Coronation Syndicate	Mar. 1
Ductile Steels	Mar. 1
H.T.V	
Telctusion	
Finals—	
Ault and Wiborg	Mar.
Zonto Consolidated Industrios	
Barcleys Rank	
Farmer (5. W.)	Mar. 1
First Guemsey Securities Trust	Mor.
Groonfields Leisure	Mar.
Ibstack Johnson	
Montfort (Knitting Mills]	
Nu-Swill Industrice	Mar 1
Woodward (H.)	

factory at Ballymena stepped up production and made a consider-ably higher contribution to group profits.

rear manufacturing, £101,376
A CAA statement shows pre-tax profits reduced to £296,000
The chairman says the shirt (£767,000) after adjustments for

depreciation, £52,000 (£43,000) cost of sales, £108,000 (£82,000) and gearing, £21,000 (£17,000).

While the chairman fully agrees with the reasoning behind high interest rates in the battle against inflation, they are having an unfortunate effect on the

In any recession, it is entirely usual for the group, particu-larly in the cloth merchanting division, to turn stock into cash Unfortunately, under the pre-sent system of corporation tax, this would lead to a clawback of stock appreciation relief which would cost 52 per cent of any funds so released, thus nullifying a large part of the benefit of destocking.

"In my view, the system of stock relief has served its pur-pose and should be replaced by corporation tax set at a realistic-ally lower rate. This would enconrage industry to cut its bank borrowings and perhaps the very act of destocking might help in the fight against inflation," says

The year-end balance sheet shows group fixed assets of £2,26m (£2,17m) and net current assets of £2.49m (£2.5m). The accounts also show 8 £22,500 ex gratia payment to a former Meeting, 116, Pall Mall, S.W., March 25 at 12.30 p.m.

J. Jackson reasonably optimistic

trading figures showing an distribution side main advance on last year, Mr. P. J. year's record figures. White chairmao of J. and H. B. He adds that the

Record profits were achieved anothin the forging division, he tells shareholders, due to a consider-able increase in demand by the alreraft industry, and the trend has continued during the current year, "1 shall be disappointed if a similar increase in profits is not obtained this year."

However, Mr. White states that with the steel strike affect.

This in

that with the steel strike affecting iron and steel scrap deliveries, and with the probability around £0.5m by the end of the

27/28 Lovet Lane London EC3R SEB

Airsprung
Armiloge and Rhodes...
Bardon Hill
County Cars 10.7% Fl.
Beboreh Ord.....

Reboreh Ore.
Flank Horsell
Flederick Parker
George Stair
Jackson Group
James Surrough
Robert Jenkins

Jackson, metal merchant, is tools and distribution sector is erally,"
reasonshly optimistic for holding up well and directors are at the point of purchasing pre-tax another small company in this In the engineering division the

company atarted to install com-puter numerically controlled machines in the latter part of 1978-79, enabling it to take advantage of the increased de-mand for complex aircraft com-

ability of a decline in car de-current year, Although the full mand, the company will be benefit from this will not show

Telephons 01-621 1212

181 Accounts prepared under provisions of SSAP 15

FINANCE FOR INDUSTRY TERM DEPOSITS Deposits of £1,000-£50,000 accepted for fixed terms of 3-10 years. Interest paid gross, half-yearly, Rate for deposits received not later than 7.3.80.

M. J. H. Nightingale & Go. Limited

WITH THE first four months fortunate if the merchanting and in 1979-80 results, "I expect this distribution side maintains last division to hold its own despite the probable lower level of in engineering gen-He adds that the engineers activity

As reported on December 18. pre-tax profits for the year ended September 30, 1979, rose from £2.78m to £3.02m on turnover of £24.9m (£22.73m). The dividend is increased to 1.4p (1.0134p)

Balance sheet shows fixed assets at £5.91m (£5.3m), and net current assets of £5.67m (£4.66m)-bank overdraft was £243.011 (mil).

Auditors say that provision for depreciation on freehold and long leasehold buildings bas not been made as required by SSAP

Accounts show the chairman's emoluments as £38,000 against £29,000 last year. Meeting, Hotel Leofric, Coventry, March 25 at 3 pm.

NOTICE TO HOLDERS OF

MITSUI REAL ESTATE DEVELOPMENT CO., LTD. (MITSUI FUDOSAN KABUSHIKI KAISHA)

6 PERCENT. CONVERTIBLE BONDS QUE 1992

Parsions to Clause 7(B) and (C) of the Trust Deed dated 21st September, 1977 under which the above Boods were issued, under which the above Boods were Issued, notice is hereby given as follows:

1. On February 25, 1980 the Board of Directors of the Company resolved to make a free distribution of shares of its Common Stock to shareholders of record as of March 31, 1980 to Japan, at the rade of 1 new share for each 20 shares held.

2. Accordingly, the conversion price of the Bonds will be adjusted effective as of April 1, 1980, Japan Time. The conversion price in effect prior to such adjustment is Yen 497.10 per share of Common Stock, and the adjusted conversion price is Yen 473.40 per share of Common Stock.

By. The Bank of Tokyo Trust an Trustee

Deposits to and further information from The Chief Cashler, Finance for Industry Limited, 91 Waterloo Road, London SE1 SXP (01-928 7822, Ext. 367). Cheques payable to "Eank of England, a/c FFL" FFI is the hulding company for ICFC Dated: March 3, 1980 HE LINCROFT **KILGOUR**

CLOTH MERCHANTING AND MENSWEAR MANUFACTURING

Summary of Accounts		
Year ended 30th Septamber	1979	1978
Turnover including Exports Profit before taxation Profit ettributable to shareholders	£14,473,530 £5,834,910 £434,696 £247,351	£13,565,022 £5,782,469 £875,170 £804,939
Earnings per share Dividends per share	5.16p 4.15p	16.95p 3.90p
Shareholders' funds Equivalent per share to	£4,695,670 97.99p	£4,660,923 97.27p

Extracts from the Review by the Chairman, Mr. Tony Holland

Trading Review 1978/79 I pointed out in my Interim Review that home trade margins for the first half year had been adversely affected by the lorry drivers' strike and the severe winter and that the strength of sterling had eroded our export margins and caused substantial consolidation exchange losses.

In the second half year there was a further sharp drop in UK profitability following the increase in V.A.T. and the further strengthening of the pound continued to affect our export performance.

Prospects 1979/80 The textile industry is in a state of recession; nevertheless, these downturns are cyclical and traditional and both our divisions are wall used to coping with them by virtue of their flexibility. The cloth merchanting division is fortunate to have its sales well spread around the world although the present decline in sales to the Far East is a matter of concern. The new financial year started slowly for the menswear manufacturing division, but in recent weeks a higher level of eales and production has been achieved.

In any recession, it is usual for us to turn stock into cash. Unfortunately, under the present system of corporation tax, this would lead to a clawback of stock appreciation relief which would cost us 52% of eny funds so released. In my viaw, the system of stock relief should be replaced by corporation tax set at a realistically lower rate.

Copies of the Report and Accounts are available from the Secretary The Lincroft Kilgour Group Limited, 7/8 Warwick Street, London W1A 3AQ. BIDS AND DEALS

Maple attracts unwelcome offer

another retailing group. The offering company, which has not

becoming unconditional.

The directors of Maple together with their financial advisers Morgan Grenfell, said in a statement that they consider the proposals to he com-

pletely unsatisfactory and advise sharebolders to take no action regarding their Maple shares. After a run of losses in the mid-1970's, Maple returned to profit in its 1977-78 year and

SCOTTISH COMPANIES CHANGE TERMS OF

Scottish Television and Gram pian Television bave agreed to a change in the share of total

82 per cent to 80 per cent while Grampian's share goes up from

area in recent years. The share of costs of operating the joint selling company bas also been changed on a mutually

S. W. FARMER

FT Share Information

The following securities have been added to the Share Information Service appearing in the Financial Times:—
ACF Industries (Section: World Markets—New York).
Sasol (Oil and Gas).

SPAIN	
	Feb. 23
1979	Price
High Low	%
310 200 Benco Bilbao	227
353 204 Banco Centrel	. 256
232 199 Banco Exterior	
286 200 Senco Hispano	
174 135 Senco Ind. Cet	
213 158 Benco Madrid	
290 157 Banco Urquijo	
285 202 Banco Viztaya	
261 195 Benco Zaragoza	
220 100 Pregados	
99 58 Espenole Zinc	
67 49 Fecsa	
78 23.5 Gal. Preciados	
77.5 52.75 Hidrola	63.5
76 52 Iberduero	60.5
178 110 Petrolege	111.2
136 65 Polroliber	
130 115 Sogeflea	115
82 53 Tolelonies	
	62.7
69.7 55 Union Elect	42.

NOTICE TO HOLDERS OF THE DAIE, INC. CKARUSBIKI KAISHA DATED 6% Convertele Debentures Due August II. 1941 64% Convertible Bonds Due 194

it will be company has made a free dis-ficultion of chares of its Common Stock charledders of record as of February 1980 in Japan (February 28 in New ock City, London and Lonembourg), at rate of 1 new share for each 10 shares condingly, the conver

> THE DATE, INC. By: The Bank of Tokyo Trust Company as Trustes

NETICE TO HELOERS OF

ITO-YOKADO CO., LTD.

6% CONVERTIBLE OFBENTURES ONE AUGUST 31, 1992 SA% CONVERTIBLE DEBENTURES DUE AUGUST 31, 1993 Pursuant to Section 3.84(1) of the Company identifies dated as of June 15, 1977 and July

1978, respectively, relating to the above-mentioned Debenmen, notice is hereby given

mentorical Dependings, notice is nervey given as follower:

1. The Company has made o free distribution of shares of its Common Stock to shareholders of record as of February 29, 1980 in Japan at the rate of I new share for each I 0 shares held.

2. Accordingly, the conversion prices of which the above-mentioned Debentures may be converted into shares of Common Stock of the Company have been adjusted effective as of March I, 1980, Japan Time, from Yen I, 304.8 per share of Common Stock to Yen 1,186.2 per share of Common Stock to Yen 1,186.2 per share of Common Stock for the 54.2 per share of Common Stock to Yen 1,208.7 per share of Common Stock to Yen 1,208.7 per share of Common Stock for the 54% Convertible Debentures Due August 31, 1993.

ITO-YOKADO CO., LTD. By: The Bank of Tokyo Trust Company - as Trustee

Maple and Co. (Holdings), the by 200,000 ordinary shares and furniture retailer, has received an unwelcome hid approach from 1985, with interest four points

The proposal comprises 21p in £1.02m. cash and about 9p in the shares 73p for each of the 263,504 4.55 per cent cumulative preference both in the UK and abroad, abares, conditional upon the offer for the ordinary shares NEIL & SPENCER

reported pre-tax profits of £1.03m for the 53 weeks to February 3, 1979. It recently announced the acquisition of a French company, Armena, for FFr 8.23m (£868,000 at present exchange rates).

TV REVENUE DEAL

revenue from their joint selling company, Scottish Television and Grampian Sales.

The STV share changes from

18 per cent to 20 per cent. The change in the share of the total income, which takes effect from January t, will more truly reflect the number of ITV homes in each transmission area taking account of the greater proportional increase in the Grampian

The S. W. Farmer Group, structural steelwork and platework maker, has entered into a conditional agreement to acquire E. A. Roper and Co., a West Yorksbire private company, for a total consideration of £815,000. The ourchase will be satisfied

below Midland Bank base rate.

Roper designs, makes and been named, is proposing a instals on-site foundry equip-price of around 30p per share, ment for ferrous and non-ferrous which values Maple'a ordinary capital at £8.4m. The shares closed on Friday at 25p... The proposal comprises 22p.

The directors say the acquisiof the offering company. The tion will enable Farmer to potential bidder would also offer expand into other markets and to offer specialist plant packagea

ACQUIRES IBIS SUPPLIES

The assets and husmess of Ibis Snpplies have been acquired by Nell and Spencer Limited, main subsidiary of Neil and Spencer Holdings, from the receiver.

The consideration is some £388,000 in cash represented by about £53,000 in plant and vehicles, and the balance in net

current assets. Ibis was a subsidiary of Ibis Kendal Holdings, of Kendal, Cumbria, and the failure of another subsidiary in the group forced the parent and all sub-sidiaries into receivership last

Ibis provides laundry and dry cleaning consumables to some 3,000 customers in the UK, and manufactures press clothing.

JOHN BROWN AND LEESONA CORP.

Following the offer by John Brown and Co. for Leesona Corporation, at the close of husiness on February 26 acceptances had been received in respect of some 142m Leesona common shares, representing approximately 70 per cent of the outstanding shares, includ-ing those covered by a warrant. The offer remains open until

SHARE STAKES

Third Mile Investment Company—Antony Gihb has sold 58,750 shares, Saranac, a wbolly owned subsidiary of Sempah (Holdings), has purchased

UK NEWS

● NEWS ANALYSIS - P & O's HYDROFOIL

High speed entrant to the ferry market

around with high speed bydrofoils for over a century. As long
ago as 1898 an Italian, Enrico
Forlanini, bad huilt s boat
which travelled at over 50 People bave been playing number of jetfoils in service had around with high speed bydro-doubled to 10 and annual By 1918 Alexander Graham Bell had designed a craft which sped

However, it is nnly very recently that bydrofoils bave begun to be taken seriously by com-mercial operators. Last year, Jetlink Ferries started operating a 50 mpb hydrofoil service hetween Brighton and Dieppe, and last week P & O Ferries

started operating the first of its two £61m Boeing jetfoils between the centre of London and Next month, the Irish government-owned B+I Line will start operating between Dublin and Liverpool and the Belgian Transport Ministry has announced in principle its decision to purchase two Boeing jetfoils for its Dover-Ostend route. These are expected to come into service Next month.

next year. In South America, a hydrofoil service hetween Buenos Aires and Montevideo will hegin run-

ning later this year. Short route hydrofoil services have been operating in Hong Kong and Japan for several years but it is only in the last couple of years that the numbers using bydrofoils, as opposed to con-ventional ferries, have started to mount up. According to the University of Washington there

are 133 potentially good hydro-foil routes in the world. There are two basic types of hydrofoil. The earliest types bad foils which pierced the water and bounced across the waves and now being marketed by Boeing under the name jetfoil, keeps its foils fully submerged and is unaffected by the motion of the

The resultant trip is far smoother than a hovercraft or conventional ferry, and the and the advantage to passengers is that of £37 there is less risk of seasickness, Hydrofolls are highly

P and O'a venture into hydro-foil transport is not a gimmick. As long ago as 1970 it started talking to Boeing and in June 1977 it started a 15-month exacross the waves at over 70 mph. perimental service hetween London and Zeebrugge.

Using one 250 aeater, it carried O.000 passengers and picked up around 31 per cent of the Belgian/UK tourist traffic.

The service had its teething problems but P and O felt that it bad proved that there was a market for a fast hydrofoil

With two hydrofoils in service by the summer, P & O will make up to six 3; bour crossings a day. In a full year the hydro-foils, which can operate in all but the roughest weather, should make 1,826 crossings. This will give P & O a carrying capacity of just over 450,000 per annum. The company is aiming to win between 5 and 6 per

cent of the Belgium/Luxembourg tourist market. When it last operated the of its traffic originated on the Continent and half of this was boliday traffic P & O believes that it has identified a wealthy market segment on the Con-tinent that is quite happy to drive to Ostend and take a hydro-

foil trip to London for a few service will provide a very real threat to the airlines. Provided there are no air traffic cona traveller can still go from the centre of London to Brussels slightly faster by air than by hydrofoil. However, the hydrofoil is often cheaper and P & O argues that it is more convenient. The low season fare is £30 single and there are cheap day returns

While P & O is keen to stimulate husiness passenger traffic from the UK, one of its main owned subsidiary of Sempah (Holdings), has purchased 425,000 shares increasing Saranac's beneficial holding to 450,000 (17.71 per cent).

Gas and Oil Acreage—Yule Catto has acquired further 225,000 shares making holding 20,06 per cent.

Hydrofolis are nignty tate numbers passenger training manual from the UK, one of its main aims is to capture a share of the package tour market. American leading hydrofoli manufacturers, and Australian visitors, for calculated that its five jetfolls example, are heing given the logged up 11.6m passenger miles option of going from the UK to and carried 323,000 passengers. the Continent by air or hydrogen by the end of last year the foil. P & O is aiming its market. ing at those tourists that come to Britain without cars. Not everyone is as convinced about the commercial visibility of hydrofoils. European Ferries Britain's higgest and most successful, cross channel ferry operator, is convinced that hydro foils are 20 years out of date.

It argues that the big dis-advantage with hydrofoils is that result, a large segment of the tourist market is closed to them Twenty years ago it would not have mattered, but now it does, However, both P & O and B + I on its Irish Sea route, are tapping large non-tar passenger markets and the speed of the bydrofoll gives them a con-

siderable edge. The other problem with hydre-foils is that they burn a lot of fuel and the recent sharp rice in nil prices could dent their

competitiveness. . A hovercraft burns around 1,000 gallons of fuel an hour and can carry over 400 passengers and 60 cars. A jetfoil burns around 420 gallons of fuel an hour and carries 250 passengers. In addition, a hovercraft travels about 10-20 mpb faster than a

jetfoil For these reasons a number of observers are sceptical about the long-term commercial the long-term commercial viability of hydrofoils and hovercraft. Hovercraft have cornered chanel market. However, both British Rail's Seaspeed and Hoverloyd are either losing money or just about breaking

The hovercraft have proved that there is a market for high-speed sea travel. What they have ant proved yet, is whether the consumer is prepared to pay for the privilege. Seaspeed reckons that it can charge a 10-15 per cent ferry operators and still fill its

JETFOIL FLEET EXPERIENCE . .

	Number of boats	Load factor	Passenge n.			
75	5	55,4	. 0.3			
76	. 8	<i>6</i> 0.8	0.8			
77	8	82,8	1.7			
78	10	66.4	4.5			
79	10	69.3	7.1			

The Nippon Credit Bank (Curação) Finance, NV.

U.S. \$30,000,000

Guaranteed Floating Rate Notes due 1987



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The Nippon Credit Bank, Ltd.

(Kabushiki Kaisha Nippon Saiken Shinyo Ginko)

S.G. Warburg & Co. Ltd.

The Development Bank of Singapore Limited Bank of America International Limited **Bankers Trust International Limited** Dresdner Bank Aktiencesellschaft

Société Générale

First Chicago Asia Merchant Bank Limited

Chase Manhattan Asia Limited

Wardley Limited . Nippon Credit International (HK) Ltd.

American Express Bank A. E. Ames & Co. Amsterdam-Rotterdam Bank N.V. Arnhold and S. H. Baring Brothers Asia Citicoro International Group-Asia

Copenhagen Handelsbank County Bank Crédit Agricole Crédit Industriel et Commercial Crédit Lyo Creditanstalt-Bankverein Richard Dang & Co. Dai-Ichi Kangyo Finance (Hong Kong) Daiwa Securities (H.K.) DBS-Daiwa Securities International Den Danske Bank Den norske Creditbank DG BANK Dillon, Read Overseas Corporation Drezel Burnham Lambert Fuji International Finance (HK) el & Co. BJ Fina ce Company (Hong Kong) Inter-Alpha Asia International Credit Alliance, Limited Jardine Fleming & Company Kulm Loch Lehman Brothers Asia Kyowa Finance (Hong Kong) Lazard Brothers & Co., Iszard Frères et Cie Hoyds Bank International London & Continental Bankers Merrill Lynch International (Asia) & Co. B. Metzler seel. Sohn & Co. Mitsubishi International Finance Ltd. Samuel Montagu & Co. Morgan Guaranty Pacific Morgan Stanley International Nederlandse Credistrank N.V. The Nikko Securities Co. (Asia) Nippon Kangyo Kakumaru (Asia) Ltd. tional (Asia) Privatbanken A/S Sal, Oppenheim jr. & Cle. Pierson, Heldring & Pierson N.V.

N. M. Rothschild & Sons (Singapore) The Royal Bank of Canada (London) Sanwa International Finance Sanyo Securities Co., Itd. Scandingvien Bank J. Henry Schroder Wagg & Co. Schroders & Chartered Shearson, Loeb Rhoades International Mariet Singapore-Japan Merchant Bank Singapore Nomura Merchant Banking Skandinaviska Enskilda Banken Smith Barney, Harris Uphem & Co. Société des Banques S.G. Warburg et Leu Société Générale de Banque S.A. Sundicomo Finance International Sun Hung Kai Finance Co. Itil. Svenska Handelsbanken Swiss Bank Corporation (Oversess) Takugin International (Asia) Tokai Asia Limited, Trade Development Bank, Trident International Finance United Chase Merchant Bankers Ltd.

Vergins- und Westberk Walto International (Hong Kong) M. M. Warburg-Bringkmann, Wirtz & Co. Westburg Parilips Bocker.

Littlenouwikebat. Yamatene Securities Co., Ltd.:

Westdenische Landesbank

INTERNATIONAL BONDS

BY FRANCIS GHILES AND PETER MONTAGNON

Softer days for hard currencies

and Swiss Franc foreign bond markets last week.

Investors no longer see justification in currency terms for the sharp interest rate differential between Deutsche Marks and Swiss Francs on one side and dollars on the other. The outlook for rising German and Swiss rates has thus made the two major hard currency sectors of the market very vulnerable.

Deutsche Mark bond prices fell less heavily last week than the week before. The increase in the German discount and the effect of stabilising prices in the secondary foreign bond market. The Bundesbank's decicion to lift limits on advances inside under its Lowadvances made under its Lom- investor demand. bard facility, which was also announced on Thursday, helped too. This should mean thet call money reles do not rise much above the new Lombard rate

rates is thus reduced.

These considerations helped affecting Swiss Franc bonds, stabilise the domeetic D-Mark and bere the gap between U.S. In neither of the major para hank were able to sell DM80m is even wider. Swiss Franc currency sectors of the market were dealer convinced lest formula for the decline in prices. support the market quite heavily

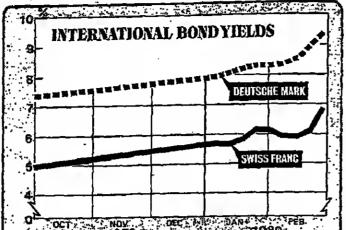
THE STRENGTH of the U.S. Capital Markets Sub-Committee dollar against all nther major agreed to the smallest calendar currencies, the rise of U.S. of new foreign D-Mark issues in interest rates to new record three months-DM580m. Three levels and a slight gain in dollar new bonda were launched last bond prices combined to extend week, all of which carry coupons pressure on the Deotsche Mark of 81 per cent and bear yields of between 8.75 and 8.79, the highest witnessed in this sector for three years. Meanwhile, the Commerzbank increased the coupon on the DM100m sevenyear issue it is arranging for

Nederlandse Gasunie by i to 81 per cent before pricing it at par. This increase did not pre-vent the secondary market from trading the issue et a discount of 21 pointe from issue price. The DM80m 10-year issue for

the City of Oslo, which is maneged by Deutsche Bank, includes e feature which, while common in the domestic D-Mark sector,

Despite the rise in German intereel rates lest week, the differential with dollar rates still stands at around 74 per cent. German bankers say investors

yields on outstanding issues up erlier on, by two-thirds of a percentege On Monday, the German point to around 61 per cent.



Coupons on two SwFr100m issues for Norges Kommunalbank and Oesterreichische Kontrollbank respectively had 'to be raised to 6 per cent, as the initial rates of 51 per cent and 52 per cent proved out of line with the market.

Another new issue, for European Investment Bank, includes an interesting feature: after above the new Lombard rate level of Si per cent et which they were quoted on Fridey. The pressure on longer term rates is thus reduced.

These considerations helped affecting Swiss Franc bonds, and here the cap between U.S. In neither of the major bard five years the coupon will be

managers both said they had been facing increasing difficulty in cetting terms for new loans. yield disparities for their clients. But all dealers agreed that virtually no new money was coming into the market. Prices did, however, move

quite strongly np and down on some days of the week. On Thursday and Friday, dealers noted some switching out of dollar Eurobonds into U.S. Treasury bonds, which have the attraction of being more liquid as an investment in today's market conditions. Treasury yields are also much closer than usual to Eurodollar bond yields although on average still slightly below.

The only new dollar issue last week was a \$200m seven-year floating rate note issue for ENEL which is managed by Societé Générale. The borrower As the Banque de France is paying a coupon of | per cent tightened money market retes over six-month Libor with a for the second week running, minimum interest rate of 51 per French Franc Eurobonds posted cent.

french Franc Europonus pusited falls of around 41 points, pushing the averaga yield on outstanding issues well above 14 out the week, but activity in secondary market dealing tenders. per cent. Meanwhile, sterling bonds also lost ground and now ded to subside on Thursday and offer yields very close to 15 per Friday. The coupon on the sem \$25m FRN to 1989 for Bergen Bank was fixed at 17; per cent, Dollar-denominated issues, in sharp contrast, had a relatively the highest ever on a floating uneventful week, although rate note. Other FRNs which uneventful week, although rate note. Other FRNs which renewed rumours of credit and are due to have their coupons price controls in the U.S. lest readjusted soon showed gains on Friday left many dealers con-

the week.
The two convertible bond Prices of straight dollar issues issues which were Bigned last showed gains of around 1 of a week for Gearhart Finance NV worth of paper on the last foreign bonds posted falls of Friday that they bad seen the polot on the week, but most and Community Psychiatric trading day of the week over four points last week, and end of the decline in prices. activity was confined to swap. Ceotres were both increased in whereas it had been forced to this had the effect of pushing German and Swiss new iesue ping. As prices were much size, the first by \$5m to \$30m ping. As prices were much size, the first by \$5m to \$30m more stable than the week and the second by \$3m to \$15m, hefore, some bond bouses were because of good investor able to take full advantage of demand.

Amount Maturity Av. life Coupon Price

CURRENT INTERNATIONAL BOND ISSUES

U.S. DOLLARS -	m.		years	%			%
18Gearhart Finance NV	30	1995	15	74	100	S. G. Warburg	7.500
#SOFTE (g'teed STET)		1986	5,6	6 1 4	100	Credit Lyonnais, Istitu Bancario San Paulo	
††Export Devel, Corp. 1§Community Psychiatri	200	1985	5	•	*	Salomon Bros. Merrill Lynch	8.681
Centers	15	1995	15 .	81	100	National Bank of Abu	
TBNP	50	1987	7 .	5 7 Ф	100	Dhabi	5.3194
†C. ITOH (g'teed				1			S.3194
Dai-Ichl Kangyo)	50	1987	7	\$ }	700	Paribas	
TENEL	200	1987	7	\$ }	100	Societe Generale	5.3194
D-MARKS							
Nederlands Gasunie	100	1987	Sł	81	700	Commerzbank	8,500
‡**Australia	150	1987	7	8	100	Deutsche Bank	8.000
‡**Westland-Utrecht					_		
Hypobk.	50	1985	5	83	100	WastLB	8.750
City of Oalo	80	1990	6 j	84	992	Doutsche Bank	8.789
**Oesterreishischo							
Kontrbk (g'teed	_		_				0 -50
Austria)	50	1985	5	83	100	DG Bank	8.750
SWISS FRANCS							
** Kingdom of Norway	100	1985	_	5 1 51	700	UBS	5.500
World Bank	100	1990	_	21	99	UBS	5.885
Norges Kommunalbank							
(g'teed Norway)	100	1990		6	100	Banque Gutzwiller, Nordfinanz,	
‡Oestorraichischa Kontrby (g'teed						Kredietbank (Suisso)	6,000
Austria)	700	7990	_	6	. 100	SBC	6.000
EIB	90	1990		6	•	Soditic	•
LUXEMBOURG FRAN	200 CZ	1990	8.6	10	99	Banque Generale du Lux	10.164
GUILDERS						Nederlands	
INederlands Credietban	k					Credlerbank	10.132
Finance NV	25	1985	5	10	991	_	
YEN						Nikko Secs.	8.589
TRENFE (g'teed Spain)	15	1990		8.3	991	Yamaichi Secs.	8.678
Finland	20	1992		8.4	99.7		
UNITS OF ACCOUNT						Kredietbank (Lux.)	9.660
#Union Bank of Norway	/ 18	1990	TO	91	99		
SPECIAL DRAWING	RIGHTS					KIIC, Nordic Bank,	

Not yet priced, \$ Final terms, "* Plecement, \$ Floating rate note, • Minimum, § Convertible †† Registered with U.S. Securities and Exchange Commission. ¶ Purchase Fund Note: Yields are calculated on AIRD basis

US BONDS

By IAN HARGREAVES

Grasping at straws BY MICHAEL LAFFERTY

THE HARD NEWS continues to downward pressure early in the certain that for the month of be bad in the U.S. credit week, ended the week at February the Fed's Interim tarmarkets. Most big banks lifted 961, four points higher then it gets will be missed by a substantheir prime lending rates on Friday by another 1 point to a record 161 per cent, and the mooey supply figures, published later the same day, were bad.

But the market is now so convinced that President Carter will include credit cootrols in the anti-inflation peckage now gestating in Washlogton that loog bond prices continued to rise, albelt somewhat fitfully.

961, four points higher then it gets will be missed by a suestan-had traded on Monday. The lial margin, yield on this issue dropped The other development on correspondingly from 12.7 per cent to 12.1 per cent.

The money supply figures, now published lele on Friday rather than late on Thursday afternoon, and therefore of reduced impact in the market, bed little discernible effect on Friday.

The other development on Friday—the prime rate—wes fairly generally expected, and confirms that a good deal of settling is still required at the short end of the market.

There are meny who doubt whether the kind of package politically possible in an election year will have any radical im-pect in inflation, but for the present a market which is still rise, albelt somewhat fitfully, following sweeping gains on Thursday when some corporate bonds surged by three points. There was a similar pattern in long Treasury issues. The 11f per cent 30-year bond, for Reserve Board's targets for example, in spite of strong the following sweeping gains on This was in spite of the fact per in inflation, but for the present a market which is still sufficiently volatile for bood offerings to he withdrawn or scaled down at the last minute is inclined to grasp at whatever straws are in hand.

Bence del Gottardo

Yamaichi International | Europe)

CONSORTIUM BANK RESULTS

Some do better than others

"IF INTERNATIONAL bank. Other consortium banks, like the average margin on all lead-volvement in me margins have been so tight Hungarlan International and ing outstanding. Very nice mergers and acquisitioos, over the past year, why is it International Commercial, have profits are still coming in from While the decline in specific that several big consortium reported profits which are un loans arranged before margins obviously takes time to be banks are now reporting large changed, or slightly down, came under the eevere pressure profit increases?" This is a Orion Bank, under reorgenised of the past year, question which seems to be management came out with e In addition to this individual cropping up a lot in the City 16 per coot decline in pre-tax banks bave a vastly differing at present. It comes in the profits, wake of a 25 per cent increase. So it

While the decline in spreads the decline in spreads. Nordic

fused.

at present. It comes in the wake of a 25 per cent increase in operation pre-tax profits at Nordic banks, and a 30 per cent impressive looking annual at Eulabank, and a 30 per cent carnings boost at Intermex.

People rend to forget that profits at Pordic banks are strongly impressive looking annual pre-tax profits at Scandinavian banking might not come through carnings by only 7 per ceot. with, results for the year reflect carnings by only 7 per ceot.

Mix of business. Some, like the froot-loading of commitment for same strongly placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance. Scandinate fees. Not very much seems to placed to trade finance scanding of committees and foreign exchange was an important contributor to profit in 1979. Company reported last pre-tax profits and foreign exchange fees. Not very much seems to place fe

obviously takes time to become bank reported last month that reflected in profits, there are also suggestions that banks may bave been able to put a brighter picture on results through the of the portfolio was only up froot-loading of commitment from 21 to 21 years.

care to cope with the effects of

international have clearly been taking great

FT INTERNATIONAL BOND SERVICE

						·	
	U.S. DOLLAR				Charm	ge on	
	STRAIGHTS	(azued	Bid	Offer	qay	work	Yiold
	Aires of Australia 10 83	50	77%	784	+05	+04	14.44
	Alex Hearden XW 95 91	30	t70				14.35
	Suitaine Can 114 85	30	189	893		+17	14.41
	Australian Res. 94 84	30	84				14.61
	Aved 0/5 Cap. 104 B7	40	t73:,		0		18.60
	Ecroficial Fin. 94 S7	100	78%	79 -	+03	+04	14.57
	SECA Glad Rate 12 86	100	891	9034	+1%	0	14.40
	CECA 11% 90	50	83	83 4	T13	+23	14.93
	Canadian Pacific 9% 89	50	75,	77-	+0%	+14	14.42
	Carle Hawley 94 86 .	50	79		+14	+14	14.75
	Camalco Inv. E. 10% St	40	77.				14.29
	Conunctial Gra. 9% 86	100	79'4				14.76
	Dome Petraleum 10 S4	50	70%	714	+1%	+2	14.99
	Deminion Bridge 10% 84	30	87	972	+0,	+14	14.39
	Ela 11% 92	80	ars				15.19
	E. a 101, 27	100	84	34	+0',	+02	14.14
	FIE 10.15 99	100	7314		-07	-04	14.72
	Ekpertin 114 87	50	854		. 0.	+04	14.66
	Export Ov. Cpn. 314 84	100	8:1				14.58
	Export Dv., Con. 94 84	150	84	DD~4	+04	-03	14.46
	Simland 9% 89	100	74'	7474	103	117	15.27
	GTE 7 nance 94 89	55	70-	103	TU.	+1%	14.49
	SMAC 94 85	100	78	893	Ţò		14.25
	GMAC 0.5 Fin. 11 84	100 50	837	941	÷	+07	
	Gould Int. Fm. 94 85.	75	74	747	TO.	107	14.69
	T Antiles 94, 89	100	77	271-	I ii	+14	15 42
	Kearecott Int 95 86	75	761.	77	+0-	+04	14.22
		125	7113	72 .	-0.		14.21
	Nut Des Telecm. 9. 86	100	80			+04	
	New Brunswick 9's 94	75	713	724	+04	+1	14.53
	icwloundland 10 34	50	70%			+0%	
	Normas Komm 97, 99	100	701:	71	+0	-04	14.82
	Norway 23, 24	150	84 -	a5-	+0+	−₽ ⊁	14.46
	Text Stotes Per. 94 89	50	76'-	764	+1 .	+17	14.S1
-	Occupantal Fin. 10% 84	50	851	85	+0%	+14	15.06
	Orient Lossing 91: 86 .	25	79	791, -	O	- 14 1	14.72
	Pennwalt 0/5 F. 9% 84	25.	837	847		+1	15,02
	Pepa cc Cap 9 84 .	100	25'	85	-0.	+04	14.ZU
-	Quebec Hydro 10 99	75 ·	677	67	-03	+02	10.33
	Seera Rosbuck 9 82	150	90-	90%	-04	+11	14 19
	Stato 1 64 89	100	76%	//:	~	+ 11	14.72
	Sweden 94: 89	100	77'	80	-01	+1 -14	15.14
	Sweeten 9 86	200	85-	854	-07	T OL	14 36
	Sweden 9% 84 Unitever NV 9% 87	100	77%	781	ns.	¥ 11.	14.23
	Unitever NY 94 27	100	833	841	102	404	14.14
	Wame: Lambert 9 84	100 ~	day ·	+0'0	n we	ek +	٥,٠
	Average price change	. Un	,	• •			-

Driver seemy	•	Change of	п .
DEUTECHE MARK STRAIGHTS	Innered	Bid Offer day week	
SIMMUNIS	-		
Alrican Cay. Bk. 8 87	100	95' 96' 0 -0	2.77 9.46
Asian Dev. Bk 72 89	100	86-, 867, -01, -1	9.57
Baicinys O'seas 64 89	100	82' 83' -04 -2	
BFCE 74 87	100	93 933 +03 -2	
6FCE 84 95	100	914 921 +04 -1	
8razil 8 87	150	37 88 -2 -4	10.50
CECA-7 91	150	85 87 -0 -0	2 8.88
Commeil of Eur. 74 89	100	89: 90 +07, +0	8,95
Denmark 7% 86	100	921, 931, +01, -11	9.47
Denmark 84 92	196	934 937 -04 -27	a.17
SEC 7's \$4		91 914 ÷04 -0	9.94
EIS 7', 89	200	89: 903 +04 -25	8.09
Finland Rep. of B 86.	150	93: 937 -03 -21	9.32
Kobe, City of 74.89	150	853 864 +04 -21	9.39
	100	198 99 +04 +02	2 8.29
Noder. Gesunia 8 86.	200	89 894 -04 -1	B.12
New Zealand 75 87		80% 81% +0% -15	9.40
Michon Tel & T 57: 87		291, 901, -01, -11	9.20
Norges Komm: 74 St		301, 907, 0 -05	a.13
Norway De 84	200	93 944 +05 -13	
Norway 74, 85	. ZSO		
OK8 6 67	40		
OKB 74 88	100	871, 884, 0 -34	
World Back 74.91	400	88 894 +04 -24	
Yorks Bank 7's 90	250	917, 923, +05, -05	
Average brice chang	res, O	n day 0 on week -1	•
SHARE COANS		. Change of	1
SWIES FRANC		and all and supply	Yield

service parce can						
SWIES FRANC -				Chan	ge on	Vial d
STRAIGHTS	LESUED	810	Offer	day 1	WEEK	T ISIO
Argentine 542 99	. 3 13	85%	867	-24	- 2-5	7.00
Asmer 5 88	. 60	87	58	0ړ±	-4-3	6.85
Apatralia 14 30	250	244	25	0	-34	5.83
Betten. City of \$1.87.	40	25	251,	-1	-45	5.53
BNDE 5 89	. 75	81	211	+0-	-24	1.00
BMW Overes 4, 91.	100	84	851	404	-6-3	5.00
Caises Not. Tels. 4% &	9 100	26	0.01	-3	~4%	5.30
Canada 3% 83	300	80%	942.	-04	→3 ′a	5.50
Copenhagen 45 St	. 30	25.	201	0	-2-	8.35
Covacil of Eur. 5 85 :.	190	87 ¹ 2	89	-013	-43	6.75 6.05
Ele 6. 91	BOO .	87	37's	-04	-04	
EID 47 St.	100	78%	791	-0%	-54	
Eint de France 47, 82	. 100	-		-7		8.21
GZ8 -1.89	100	82	EX.,	-O's	-15	5,62
		22	89	D	-31	7,44
TITE STREET, LINK, St. 194.	. 100	304	80%	-75	-84	6.31
JUSTATIO TAKE 572 BD	- 50	574	944	-0-	-04	7,05
Malaysia B 🍀		257	30.	Ų.	-04	5 81
Norwe Sank 5 86	7 100	30'2	89	-04.	-3	5.70
Mornie Sant 5 66	- 6	25	81.	- Z-5	-/-	5.57
Horges Komm. 43, 51	100	52°4	78		_ - 1 2	8.56
OK8 3 - 91	100	*	10°	- 67	_31	6,53
Opin City of 45 8	- 200	-04 -04	W.	- 742	-37	8.50
Shikeka El. Per A. B	2 100	77	#77. ·	-06	~7	e.60
Series 4 92	200	#D1	272.	-ŭ-	- 2°-	a. 17
Spare 4 97 Stelledg 4's 91	- 20	227	364	-Z12	-4 ^r	6 53
Vanish Alberta Alle Miller	. 50	- 18 Page 1	2374	-1-	-7.	7.28
171a-LJ 6L 47 50	4868		001 -	- 71.	-54	e.27
Word Busk 43, 85	190	85	26 -	-04	-31,	5.45
World Book 45 31	700	84	807	-0:,	-2%	6.32
World Best 44 85	Q	day.	-5% 0	A AAG	ak -	44
	- ··.					

					Chart	94 011	•
	YEN STRAIGHTS	15504	d Bid	Offer	GSA	wook	Yield
	Australia S.6 83	30		851	-14	~ 1%	10.94
	Australia 612 88	20	51				9.83
	EIB 74 89			1 891	+0,		
	Finland S.S 83			861	-04		
	Finland C.2 68	10	81	821	-04	~~	10 70
	Average price chang		On da	v -07	- 07 4	-	-1
	MAISE DIES CIRIL	g-us	011 04	, -u		WGA.	•
	the state of the s				Chan	ge on	
	OTHER STRAIGHTS	12904	rd aid		day		
	Avco Fin. 104 88 CS	25	81	813	+04	+04	15.04
	Sell Canada 10% 86 CS	60			+04		
	Cr. Fongier 10% 84 CS	30			~04		
	Ex. Oav. Con. 10 84 CS	50	87				14.01
	Fat. Can. Inv. 10 84 CS	50	26		+05		
	Hudeon Bay 101, 89 CS	60	80	. 91	~04	-14	14.40
	Quebec 104 86 CS	50	61		~04		
	R. Bk. Canada 10 86 C3	40	83	976	+04	-13	14 17
	R. Bk. Canada 10 84 C\$	40	73	741	+0%	-03.	14 34
	Capanhagen 8% 81 EUA	20	92	991	+04	- 31	0.75
	Copyrings of at EON	25	93		.0		
	M. Bk. Onmk. 9 91 EUA	40	85		~04		
	SOFTE 84 89 EUA		921	937	-0%	_ 11	10.77
	Algemene Bk. 84 FI	75					
	Ned. Geeunie 81, 84 FI	50	913		-34		
	Ned. Middbk. 84 84 Fi	75	193		~0°4		
	Norway 84 84 Fl	100	921	921	~04	-14	10.60
	Norway 87, 84 Fl	100	921	924	~04	-1	70.39
	Philips Lamos 84, 84 Fi	75	924		-0-		
	Air France 11 84 FFr	120	90	91	-04	-4	13.91
	Euratom 9% 87 FFr	150	785		~04	-67ª	14.57
	Finland 11 84 FFr	30	89			-3	
	Finland 11's 89 FFr	70	857	864	٥	-54	14.17
	Gaz de France 11 84 FFr	150	897	90%	+04	-5%	13.93
	IAM France 11% 84 FFr	120	82	93	~074	- 21 _E	14.09
	Rangult 94 85 FFr	100	823		-0,		
	Saint-Gobain 94 86 FFT	130	807	217	-0%	-44	14.47
	Solvey at Cie 94 87 FFr	125	787	807	-01/2 -1/4	-35	14.53
	Total Oil 94 87 FFr	150	77	78%	-17	-S7	14.87
	Citicorp O/S 131, 90 £ .	50	92	825	-04	-1	10.01
	Ela 11'2 al £	25	80	80%	-04	-23	16.21
	Finance for Ind. 13 91 £	15	914			-2%	
	Fin. lor Ind. 1212 89 £	30	863	87-	-04	-130	15.21
	Can Flor Co 121 89 6	50	88)		-04	-14	14.83
	Gen: Elec. Co 127 89 £ Indonesia 84 91 KO	7	193	8317		0	B.74
	Indoorgels da at ko	10	1951			ō	e.71
•	Mitsubiehi 71, 84 KO	12	1933			ŏ	a.52
•	Nomes Kom. 7 89 KO	- '7	1907		ŏ	ŏ	9.66
	Occidental 84 81 KO				-02		
	Akzo 94 87 LuxFr	500	925		-07		
	Euratom 8 87 LuxFr	500	874		-0.7	-01	9.83
	Euraram 9% 88 Luxfr	500	99	100	-13	_17.	10.05
	Ela 94 68 LuxFr	600	977	32,4	_ 13	_21 4	10.00
	Volvo 94 87 LuxFr	500	9614	9/4	-1%	-27	10.30
	PLOATING RATE		m	W C			- 44
			Bld O	mer L.	010	Spri (15.45
	Altied Irish Bk. 54 87	0%		381 2			
	Banco di Roma Int. C 87	014	86%	99% 28	74 1	54 1	15.89

Volvo 94 87 LuxFr	500	9 9	974	-1% -24	10.30
FLOATING RATE					_
NOTES	Spress			ite C.cpn	
Altied Irish Bk. 54 87.	Oh	973			15.45
Banco di Roma Int. CB	7 04	86%	99% 28/		1S.89
Bank of Ireland 5% 89	‡04	87	977 21/		16.58
Sank of Tokyo 54 89	10%	967,			14.99
Barclays O/S Inv. 5 9	0 04	95			14.75
Bargen Bk. A/S 5 88	‡04	974			17.72
Eque. Indo Suez 54 8	9 0%	974			10.03
Citicore O/S F. 6 94	. +04	985	994 8/		14.60
Citicorp Q/S F. 83	. <u>.</u> ≨‡0	36 7	999, 23/		15.14
Citicorp 0/5 F. 84	. ‡0	362			17.00
Co-operative Bk. 8 86	. 04	97%			15.43
Creditanatali 512 S1	.540%	97%	984 14/		15.1B
CNT 54 86	. §04	987	994 16/		15.34
GZB 57 89	. ‡014	973	98 1/		14.96
Jugobanka 8 89	. 04	9217	931, 23/	s 1e	77.20
ind. Bank Japan 54 8	7 04	97	974 15/		14.65
17CB Japan 54 86	. 04	963	974 13/		14.71
LTCB Japan 5 89	. 04	36,	987, 7/		14.68
Mfre. Han. 0/8 54 84	. #0%	98%	987, 30/		17.36
Midland Intl. Fin. 5 &	9 19%	267	59 20/		15.19
Nacional Fin. 64 BS	. 04	98%	974 25/		15.10
Nat. West. 54 94	. §61 ₄	953 ₄	97½ 11/		16.40
Nippon Credit 64 86	. 01	985	97-, 12/		14.90
Niconn Credit St. 87 .	. 104	974			15.04
Royal Bk. Scot. 54 94.	\$‡014	977	984 11/		14.90
Soc. C. de Bque. 6-2 8	7 04	362	967, 3/		13.71
Soganal 5% 89	. 50°4	DE3.	964 13/		14.94
Sweden 84, 91	±01	985	974 18/		14.90
TYO Perr. 9 91 (G-lock)		965	974 24/	15.37	15.91
Williams & Glyn 54 91	01	974	97% 14/3	3 13	13.32
Bq. E. d'Alg. 44 89 SI	04	92	93 18/	6.69	7.23
Average price chan	URS	On da	y 0 on w		
AANGETTOI E	Cnv.	Cmv.		Chg.	

Royal Bk. Scot. 54 943	\$0°4		957		134	13.71	
Soc. C. de Bque. 6-2 87	04		364		14.44		
	504				14.44		
	‡0¹-		974		15.37		-
TVO PWT. 9 91 (B-lock)	214	96%				13.32	
Williams & Give 5% 91	04		977		13		
Ro F d'Alg. 44 89 SF	O.	92	93		6.69	7.23	
Avorage price change	95	On da	A O OL	1 WCC	k U		
	Cmv.	Cmv.			Chg.		
		price	Bld	Offer	day	Prem	
AGA Akt'bolag 74 891		145	11872	1192	+04	-4.78	- :
Ajinomto 74 95	2/80		30 ¹ e	914	-02	5.09	•
Ales let Wh She Sh	1780	40	322	931	0	21.4	- (
A L. Codical 7 84T	I/IH	DUD	777	76%	-24	2,40	- 1
A 41 41	51 (3)	5/0	20.3	99%	-0,5	4.08	
A'L - Calou D/S F. 4 34 3	<i>51 1</i> 3	0/3	188	89	+67	8,52	- 6
A Jie Colone 43, 43 II	u n	.,,,,,	1005	1025	+0%	-3.04	- 1
			892	80,	-04	22.75	3
			111	112	-0,5	10.81	1
LDC Internated 2 89 b	<i>u r</i> a ,	8.33 1	1221/2	1235	+0.5	6.78	(
Meidensha Elec. 7 94T	/73	210	8574	854	-04	17,62	Č
**************************************	H 13		1127	1 174		7,40	ì
			1997		+0.5		
war flag lod 8 Ma /	/ /3	133 .	29	704	0	4,95	1
- L'L- CON 74 35 . IL	u zz	100		897	-37	-1.33	h
		140	374	994	-04	-5.05	1
			937	937	-14	22,02	Ē
		1234	8212	83.7	+01,	43,83	Ď
			724	73%	-07	37.04	
Uny Co. 83 85 OM11	/TB 1	1071	87%	884	+0%	30,54	S
I Town I Town	1 70	. ne	20000	luctio	n in u	rhibla	S
The Financial Times Ltd							Ğ
Hencent. Data supplied	DY II	MAL-DY	hid a	BIVICE	9] B	34b-	_
A ASSETTIONS !	-	ations	17				

BONDTRADE INDEX AND YIELD EUROBOND TURNOVER minal value in Sm

Cedal Europies U.S. S bonds Last wesk . . Previous wask Other bonds

 No information available— previous day'e price. † Only one market maker eupplied a price.

STRAIGHT BONDS: The yield is the yield to redemption of the mid-price; the emount issued is in millions of curreocy units ex-cept for Yen bonds where it is in billions. Change on week= Change over price e week earlier.

FLOATING RATE NOTES: Denominated in dollars unless otherwise indiceted. Coupon shown is minimum. C.dte≃Date next coupon becomes effective. Spread = Margin above six-month offered rete 11 three-month; sebove meen rate) for U.S. dollars. C.con = The current coupon. C.yld=The current yield.

CONVERTIBLE BONDS: Denomineted in dollars unless otherwise indicated. Cbg. day= Change on day. Cnv. dete=First date for conversion into shares. Cnv. price=Nominal amount of bond per sbare expressed in currency of sbare at conversion rate fixed at issue. Prem=Percentage premium of the current effective price of acquiriog most recent price of the shares.

The list shows the 200 latest international bends for which an adequate secondary marke exists. The prices over the pas week were supplied by: Arah Company for Trading Securities SAK; Krediotbank NV: Credit Commercial de France; Credit Lyonnais; Commerzbank AG: Deutsche Bank AG: Westdeutsche Landeshank Girozentrale: Banque Internationale Luxembourg: Kredietbank Luxembourg Algemeoe Baok Nederland NV; Pierson, Heldring and Pierson; Credit Suisse/Swiss Credit Bank: Union Bank of Switzerland; Akroyd and Smithers; Bankers Trust International; Bondtrade: Credit Commercial de France (Secs.) London; Citicorp International Bank; Daiwa Europe
NV; Deltec Trading Company;
Dillon, Read Overseas Corporation; EBC; First Chicago;
Goldman Sachs International
Corporation: Hamburg Bearly EBJ Corporation; Hambros Bank; IBJ International: Kidder Peabody International: Merrill Lyuch: Morgan Stanley Ioternational: Nesbitt Thomsoo; Salomon Brothers Interoational; Samnel Montagu and Co.; Scandioavian Bank; Strauss Turnbull and Co.: Sumitomo Finance International: S. G. Warburg and Co.: Wood

Closing prices on February 29

These Bonds having been sold, this announcement appears as a matter of record only



CITY OF OSLO

N.Kr. 100,000,000 10½ per cent. External Bonds 1990

Sparebanken Oslo Akershus

Kuhn Loeb Lehman Brothers International Kleinwort, Benson Limited

Algemene Bank Nederland N.V. Christiania Bank og Kreditkasse Den norske Creditbank

Atahli Bank of Kuwait (K.S.C.)

Smith Sarney, Herris Upham & Co.

Swiss Bank Corporation (Overseas)

Westdeutsche Landesbank Girozer

Sparekessen SDS

Bergen Bank **Credit Suisse First Boston Limited** Deutsche Bank Aktiengesellschaft

Kredietbank International Group The Nikko Securities Co., (Europe) Ltd. Union Bank of Norway Ltd.

msterdem-Rotterdem Bank N.V.

Vereins- und Westbi

Bank of America Limin		Bank Brus	ssel Lambert N.V.	Ba	nk Gutzwiller, Karz Um	, Bunganer]	Oversess)	Bank Mees & Hops NV
Bank of Tokyo In Limite			Banqua Géné	rale du Luxi	embourg S.A.		Banque	de l'Indochine et de Suez
Banque Internet	ionele è Luxami	oourg S.A.	Бало	us Nationa	le de Paris		Senque de Neufli	ze, Schlumberger, Mallet
Banque de Paris	et des Pays-Ba	Berck	sys Benk Internatio	ona)	Baring Brother Limited	s & Co.,	Bayerische	Landesbank Girozentrale
Bayerische Vare	insbank	Berliner Hand	els- und Frankforti	er Bank	B.S.1 Under Limite		Calsse des	Dépôts et Consignations
Cazanove & Co.		Chase M	enhattan ited		Citicorp Inter	nstional Gro	цр	Commerzbank Aktiengesellscheft
Copenhagen Ham	ndelsbank	Cradit Comme	reial de France	Crédit	Lyonnais	Creditanstal	t-Bankverein	Daiwa Europe N.V.
Ogn Ognske Bani et 1871 Aktimelskyb		Peutsche Girozent Deutsche Kommunisch		G BANK enteremekati		and Oversees	Corporation.	Dresdner Bank Aktiengessliecheft
European Bankin	то Сотрепу б		notional Finance Limited	A	etany Glbbs Holdis	100 L1d.	Goldman	Sochs Interpational Corp.
Hambros Bank Limited	R. Henr Egnk-Ala	iques]r.	Hill Semuel & Co. Limited	H	Dare Govett		ernationel nead	N. A. Jansen & Co A/S
Kansallis-Osake	Pankki	Kidder,	Paebody Internatio	isne	Kuwei1 i	oreign Tradi	ng Contracting 8	Investment Co. (S.A.K.)
Kuwait Internatio	onel Investment	Company s.a.k.	Kuwalt love	stment Con	npany [S.A.K.)		rothers & Co., imited	Lezerd Frères et Cle
Lioyds Bank Inter Limited	mational	Manufacturers H United	anover Mo	rrilî Lynch (nternational & Co.	L Mo	essel & Co.	Samuel Montagu & Co Limited
Morgan Granleli Umkad	& Co. N	Torgan Stanley Int	ernational	The Nation	al Bank of Kuwait	8.A.K.	Norddeutsche	Landesbank Girozentrale
Nordic Bank United	Sal. Oppeni	reim jr. & Cle.	Orion Bank Linebed	Pierso	on, Heldring & Piers	lon N.V.	Postipanikki	Privatbanken A/S
Rothschild Bank	AG		hschild & Sons Imited		Rows & Pitms	9in '	Salomo	n Brothers International
t 2 Sanny Mills	& Ca.	Scandings	len Rank	J. He	nev Sekrader West	-00	Skandi	naviska Enskilde Rankan

ken boil

WORLD STOCK MARKETS

	Companies and Markets	WORLD ST	OCK MARKEIS	
	HISU I TOW SECON :	RIZII LOW SILOR - IIIZII	29 High Low Stack 22 1272.80	Fab. Wash I tow
1 1 1 1 1 1 1 1 1 1	1279-00 Stock Feb. 1851 185	1016 550 O. All. Pap. Tax 254 1552 154 Interpretation 157 15	150	Fab.
NEW YORK—ON JOSEP Part Pa	12 125	7314 3036 Merck	1.220 798 Micholin 8 327 440 Moet-Nenness	9,070 7.40 2.82 CSR 5.70 13.50 5.00 Smith CG Sugar, 11.85 798 2.10 1.22 Carlton & Utd 2.04 1.90 0.72 Sprec 1.70 0.37 0.17 Cluff Oil Aust. 0.34 14.50 9.90 Tiger Oats 14.60
## 15	•	Feb. Feb. Feb. Feb. 1979-80	1979-80 Feb. 22 Prica 371 231.8Perrier	226.5 1.25 1.27 Cockburn Cemt. 1.35 1.27 Cockburn Cemt. 1.35 1.87 Coles (G.1
Change Change Change Stecks Closing an Stecks Closing and Stecks Cl	Feb. Feb. Feb. Feb. Feb. Feb. Feb. Feb.	AUSTRALIA Sydney All Ord. (1954/89) Sydney All Ord. (1954/89) Sept. 67 585.5 15788.49 581.71 947.47 (14/2/80) 2547.84 (27/7) AUSTRIA Credit Aktien (2/1/92) 58.27 58.16 58.56 58.56 58.48 (7/1/80) 51.58 (2/1) SELGIUM Beigian SE (3/1/2/63) 22.57 160.64 109.50 100.65 105.47 (5/16) 28.86 (3/1/8) SELGIUM COPENMARK Copenhagen SE (1/1/76) 77.24 77.75 78.18 79.56 97.44 (25/7) 77.24 (29/2/6) FRANCE CAC Cenoral (29/12/8) 111.27 111.6 111.7 111.1 115.2 (14/2/80) 62.4 (16/6/78) 105.89 105.4 105.0 106.4 109.0 108.7 (15/2/86) 95.5 (3/1/80) OERMANY FAZ-Aktien (3/1/2/85) 255.15 935.51 255.29 255.56 255.56 (16/1/78) 213.11 /27/1/80 OERMANY FAZ-Aktien (3/1/2/85) 255.15 935.51 255.29 255.56 255.56 (16/1/78) 213.11 /27/1/80 OERMANY FAZ-Aktien (1972) 81.5 81.1 82.6 82.3 84.2 (24/1/78) 81.1 (26/8/8) HOLLAND ANP-OBS Indust. (1570) 81.5 81.1 82.6 82.3 84.2 (24/1/78) 81.1 (26/8/8) HOHG KOHG Hang Seng Bank(61/7/64) 814.31 \$19.74 \$75.13 894.93 265.17 (15/2/85) 493.85 (27/1/8) TTALY Banca Comm. Ital (1972) 94.45 35.33 93.86 85.31 85.81 (26/2/80) 483.85 (27/1/8) DOW AVETO26 (16/5/43) 8764.99 8774.99 8,777.345759.45 2988.93 14/2/80) 483.85 (27/1/8) NORWAY Oalo SE (1/1/72) 134.26 155.87 189.12 135.88 144.70 (14/2/80) 74.46 (18/1/78) SOUTH AFRICA Cold (1986) 895.8 591.9 391.0 850.8 895.9 (25/2/80) 226.40 (17/4) SOUTH AFRICA Cold (1986) 895.8 591.9 391.0 850.8 895.9 262.2/80) 220.40 (17/4) SWEDEN 376.05 376.55 574.78 374.49 491.54 (6/2/79) 371.57 (24/6) SWEDEN 380.60 A.P. (11/58) 378.05 575.55 574.78 374.49 491.54 (6/2/79) 271.50 (27/78) SWEDEN 380.60 A.P. (11/58) 378.05 575.55 574.78 374.49 491.54 (6/2/79) 371.57 (24/6) SWEDEN 380.60 380.80 380.80 387.50 387.50 387.50 387.50 387.50 387.50 387.50 387.50 387.50 387.50 387.50 387.5	Nigh Low	233 7,10 3,08 conzine Riotin 2,50 3,00 3,00 0,68 conzine Riotin 2,50 3,10 0,67 conzine Riotin 2,50 1972-80 Fob. 29 Price 950 1,05 1,00 conzine Riotin 2,50 1,00 conzine Riotin 2,50 1,00 conzine Riotin 2,50 1,00 conzine Riotin 2,50 conzin

المكذامن المتحل

Hunting

Gate

Building and Givil Engineering

£25m road contract in Trinidad

TEAMWORK Trinidad, a new Margaret Highway to dual artery, the Churchill-Roosevelt associated company formed in carriageway standard, together highway-a similar length of Trinidad by Taylor Woodrow, with three interchanges 15 linking side roads, extensive has been awarded its first con-bridges. tract worth £25m by the Government of the Republic of Trini- Trinidad Engineering and Re- up of embankments, will be dad and Tobago, Ministry of search (1978), C.E.P., and Free necessary where the road Transport and Communications, man Fox and Partners.

eight miles of the Princess Chaguanas to the main east-west summer, 1982,

Health Authority is to be built

clough Building under a £6.2m

A DESIGN and build project for a new boiler house com-

plex to serve the Orgreave Works at Sheffield for British

tion of the boilers, firing equip-

wood by-pass and Barnet Way

Complex of Wernick buildings.

the Wernick service.

buildings

with a 130-metre access road, next year. .

contract.

£6.2m hospital job

Hospital Nucleus Development partitions in situ concrete floors

by the East Anglian Regional and steel frame roof covered

by the local division of Fair- Easter and should be completed

This consists of an extension Ipswich is one of the first new

at a higher level, and have a and structural engineering con-

ment, pipework, tankage, elec-trics, and other necessary are to be delivered in the ancillary equipment. pletton in 1981 and the boilers are to be delivered in the middle of this year.

Crest Hotel, Gloucester, under a will be provided.
contract awarded to Lesser External finish will have

Design and Build estimated at facing brickwork with coloured

taurant and bar, reception area nearby housing development by

Top quality system building-that's "Wernick built"!

Whether it's a fine two-storey office block, a multi-

function sports emplex, a hospital ward or a Scout headquarters. Versatility has made Wemick Britain's

largest independent system buildings manufacturer, based on providing the right building, at the right

It pays to see Wernick first Free advisory & planning; fast delivery; assistance with finance-all part of

4th Annual Seminar

An examination of the liabilities of

architects, engineers, and contractors

offering 'design & build' structures, and of

what they may do to protect themselves.

27th/28th March 1980

Investment & Property Studies

01-242 2481/01-242 3473

Portman Hotel, London W1

S.Wernick & Sons Ltd. Michend Sates Lindon Road

S. Art September

deat manufacturer of timber-frame system buildings.

price at the right time - tailor-made!

Hotel job for Lesser

New boiler house

underbridges and five foot- drainage and landscaping is in-

Engineers for the project are works, including the buildinglighways Division. In addition to the eight miles swamp. Work is now under Son (Northern). The project is for upgrading of main road—which links way, with completion due in For British No

with aluminium cladding.

Work is due to start after

by April, 1983. The Nucleus Department at

The steam-raising plant con-

sists of three stoker-fired water-

Project is scheduled for com-

Improving PHASE ONE of the Ipswich weight internal concrete block production

volved. Considerable earth-

crosses five miles of the Caroni

facilities MAIN CONTRACTOR for a major modernisation scheme at the Speke, Liverpool, factory of Goodlass Wall and Company (maker of Valspar paints) is

Valued at £74m, the project is to improve production facilities for resins, oil and emulsion paints, warehousing for raw materials and finished product, as well as various ntilities and amenities.

tube boilers and a fourth gas £4m award

tion and steam plant at the new Sha Tin teaching hospital in Eastern Hong Kong is to be installed by Drake and Scull (Hong Kong) under a £4m

The new luxury hotel will adminium frames. The flat-have 100 bedrooms, seminar roofed single and two-storey rooms, boardroom, public res-£3m piling and foyer. means of a 3.5-metre-high It will be situated close to the M5 at the junction of the Barn-landscaped areas. work for Completion is due in March

Pillog, part of the WGI Group. The largest, worth £120,000, for Burnley Borough Council, is for a sheltered housing development at Clifton Farm, Crow Wood Avenue. It involves the design and construction of reinforced concrete retaining walls with ground heams oo 160 shell

At the inversimend industrial Estate, Perth, the company is to drive 330 pre-cast reinforced coocrete piles for an abattoir for FMC and at Portishead, near Bristol, 464 shell piles are to be driven for warehouse units on Western Samoa and erection of behalf of the Britisb Rail Pro- a 400 kV overbead line in the perty Board, South West Region. Didcot area of Berksbire.

£7.6m Sir.A. **McAlpine** awards

TWO CONTRACTS, with a total value of over £7.6m, have been won by Sir Alfred McAlpine and

For British Nuclear Fuels, at building, an exhibition building and an entrance lodge, all sited at the north end of the Windscale and Calder Works. Foundations, fencing, drainage and roadworks as well as mechanical and electrical installations, are included in the contract which is due to be compteted in 18 The second contract is from

David Brown Gear Indostries. This is worth over £2m and is for a single-storey complex to be built at Huddersfield. The site is at David Brown's premises in Howarth Lane, Lockwood, and the contract calls for construction of single storey machine, assembly and development shops, test cells, external works and road re-alignment. Electrical and mechanical installations are also included in the contract.

More than

£2m for

J. L. Eve

Both compaoles have contacted to combine their exist
to companies with mast surely open up even more successful and independent to combine their existtracted to combine their exist- to companies with profitability and wider-spread opportunities White Young Consulting ening and independent manage- or liquidity problems; services for both companies at home and gineers, are responsible for the ment. consultancy operations to the smaller or medium-sized project which is due for cominto one, which will offer a industrial concern which may pletion in a year.

Cartwright wins £6m awards WITH ITS latest contracts, office block at Foxbill, Refurered out on 52 bomes worth a total of over £6m, the bishment costing £128,000 is to (£470,000). Also in Bradford a Joseph Cartwright Group is be carried out to the Baptist measured term contract for leading forward to a busy form.

looking forward to a busy first Church at Widcombe.

170 dwellings for the Jephson Second Housing Association. Also in Bristol work has started on 41 flats for Northavon District Council (£490,000).

Lackham College of Agriculture struction is to carry out two estimated to cost £800,000 ionear Chippenham the company is to build a £122,000 bostel block in reconstructed stone for Sellafield, Seascale, Cumbria, the the Wiltsbire County Council, Scholemoor Estate, Bradford, training centre, design services ment of the Environment con- at the Bradford Moor Estate dustrial premises for Conti-

spheres have married together

to produce what is believed to

be the first nierger of its kind

Consultants, P.O. Box B134,

Britannia Buildings, St. George's Sauare, Hoddersfield West

veotilator, designed and guaran-

is being maoutactured by John Henning (Engineering) and

marketed by Aerocowl Market-ing both of Northern Ireland.

in five years of research and

proved in independent tests

conducted at the Polytechnic

based on an aerofoli mounted in

an expansion chamber above a

In addition to eliminating

Aerocowl also reduces fuel diameter,

downdraughts and assisting

with summer ventitation, the

costs, prevent rain entry to the

back boiler, underfloor

makes for quieter ignition of burning.

draught fires, open and canopied

fireplaces with box grates, solid

fuel ranges, and gas, oil or solld fuel central heating systems. It

venturi system.

The Aerocowl way developed

Yorkshire (0484 21433).

tract at Willsbridge. near cootract with the Anchor Hous- out an extensive modernisation Bristol. Under this contract, log Association. Also in South programme below stage at the valued at £2,35m the company is Wales work is now under way Grand Theatre, Leeds. to complete the construction of for Property Services Agency on the construction of an aircrew front work has started on the room at R.A.F. St. Athan construction of a 50,000 sq ft (£125,000).

To house students at the Leeds based J. Cartwright Con- Sowry with new premises, is District Council. One is at out.

All the expertise in one basket

tices in two entirely different to their parent companies'

in this country. Result of an manufacturing industries in the

COMBINED flue terminal and oil and gas burners, and also

flue, and balances pressure in held at a predetermined height

teed to elimioate downdraught, for flue sweeping.

TWO PROFESSIONAL prac- stronger, wider range of skills not bave previously engaged

tional provider of services to

alliance between accountants North of England, while at companies' totally different

Armitage Norton and engineering consultants Ewbank is the
formation of one hroadly based
consultancy, Armitage Norton

Armitage Norton

Lugiand, while at companies totaly different
Ewbank's Brighton head areas of operation—is that the
quarters, 600 people are inone, shared-powerbouse of
wolved in the fields of power activity will he constantly availgeneration and transmission, able to common clients of both
desalination, oil and gas pro-

desalination, oil and gas pro-

duction facilities, pipelines and

considerably reduces the need

fixing legs, the lightweight unit

can be fitted very simply within

two minutes. Fixing is achieved

by turning a wing-nut on the

top of the uoit, causing the

three self-centring fixing legs to

expand outwards and eogage

firmly against the inside of the

chimney pot. The unit can be

installed in a similar manner

even when no chimney pot Is

are needed to cover all sizes

of flue from 4 Inch to 10 Inch

In operation, the Aerocowl is

ting up an airflow stabilising

system, only the air avallable at

preventing accentuation of any

draught problems in the house and eliminating excessive fuel

Only two sizes of Aerocowl

Made of aluminium with steel

building services.

Eliminates the downdraught

existing clieots.

Armitage and Norton has a microprocessors

total staff of 500 and is tradi- computers.

work on telephone exchanges In Newport, Gwent, the com- awarded by the PSA is expected Its Bath-based building company is to construct 28 flats for to amount to £60,000 per annum pany, Hayward and Wooster is the elderly together with Under a contract valued at undertaking a completion conwarden's house under a £337,000 £250,000 the company is to carry

> On the industrial building factory and office building at Other newly awarded con- Kirkstall, Leeds. The project, tracts are in the north where which will provide Jowett and bousing improvement schemes cluding the extensive site for the Bradford Metropolitan preparation works and fitting

At Norolanton, Yorkahire, company is undertaking the while in Bath work has just where 94 homes will be up- work is under way on a project design and construction of a started on a F142,000 Depart- graded (£800,000) and the other valued at £130,000 to provide intract for the upgrading of an where improvements will be nental Pressing Technics.

consultants; and expert advice

io the fast developing fields of microprocessors and micro

What makes the merger

unusual-apart from the two

the accountants and engineering

Now, a whole series of options

All winds are converted to a

transverse laminar airflow and

drawdown suction which occurs

when winds blow along parallel

with the long axis of the dwell-

ing is countered by a simul-

taneous increase in the negative

pressure. Thus negative flue

pressure is always greater than

any negative pressure created in the room, This ensures that

even under extreme conditions.

the chimney continues to draw.

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of Melchbourne, Shelton and

Drainage

DESORAH PICKERING

consultants.

overseas.

get work in Iraq QUANTIY SURVEYORS D. G.

Surveyors

More Than

Builders

Jones and Partners have been appointed by the State Organisation for Tourism of Iraq to provide a post-contract service on six hotels. Construction work has commenced, although completion is not scheduled until

Each of the botels will have conference facilities, a shopping arcade, tennis, swimming pool, bowling alley, discotheque and nightclub. The hotels involved are the 300-room 22-storey Sheraton, 380-room Meridian, 310-room 17-storey Babylon, and 282-room Novotel in Bagbdad, and a Sheraton and Novotel in Basrah.

Further botel development is planned and the State Organisation for Tourism is currently inviting prequalifications from contractors for another 5-star hotel in Mousl.

Pipelines to be laid

MANUFACTURE and laying of 1.35km of 202mm internal diameter flexible submarine pipe is to be undertaken for the Anglian Water Authority by NKT Copenhagen. This pipe is to form a sea outfall for sewage from Aldeburgh, Suffolk April by NKTs pipelaying vessel. After the Aldeburgh work the vessel will go south to the Solent where it is to lay about 7,8 km of pipeline from near Southampton to Gunard Bay, 1sle of Wight for the Southern Water Authority. The pipeline will be used to supply fresh water from the mainland. Value of the two contracts is over £1m.

IN BRIEF

· Ridett Bulldiog Contractors is to build 26 flats and warden's accommodation at Whitepit the flue when the door of a above the chimney orifice, set- MAIN drainage in the villages Lane, Newport (£490,000) for room is opened.

Accommodation at whitepit the flue when the door of a above the chimney orifice, set- MAIN drainage in the villages Lane, Newport (£490,000) for room is opened. It works equally well on all system which compensates any Yleiden is to be carried out tion and 36 two-bedroomed flats types of fireplace or central negative presure caused by the for North Bedfordshire Borough at Carter Avenue, Shanklin heating systems—enclosed fires cowl. Due to this stabilising Couocil by A. Street and Com- (£515,000) for South Wight pany under a £322,000 contract. Borough Council.

the fireplace orifice is used. For the same council the com. Miller Buckley Construction pany is also to undertake work has been awarded a £392,926 in connection with the Felmer-sham and Sharnbrook rising for huilding a ploeyard and main at a cost of £179,000. contract by North Thames Gas for huilding a ploeyard and stores at Uxbridge, Middlesex.

Petrocarbon Developments.

to the existing bospital in Heath District General Hospitals based Road and will have wards for on a cruciform layout capable 308 beds, six operating theatres, of accommodating specialist accident and emergency departments, offices, and supporting designed by the regional architect at Cambridge; quantity sur-The building will be generally veyors are Davis Belfield and of two storeys with plant rooms Everest (also of Cambridge), reinforced concrete frame and sultants are Charles Weiss and external cavity brickwork, light-

Petrocarbon completed a capital study and estimate for the paint company last year, and has now been appointed to bandle detailed design, procurement and erection of the plant. Work bas started and is expected to last for two years.

Steel (Chemicals) has gone to the combustion division of the combustion division of Vosper Thornycroft (UK), member of British Shipbuilders. Valued at some £4.5m, the contract embraces the civil and building engineering work in building engineering work in Shipbuilders at its Wallsend Factory. The supply and installa or liquid-fuel fired watersube boiler, with a combined steam output of some 200,000 to per hour. Boilers are of the Giblour Boilers are of the Giblour to supply and installa factory. The supply and installa or liquid-fuel fired watersube boiler, with a combined steam output of some 200,000 to per hour. Boilers are of the Giblour to supply and installa in Hong Kong Kong AIR-CONDITIONING

AIR-CONDITIONING, ventila-

WORK HAS now begun on the Crest Hotel, Gloucester, under a will be provided.

The bospital, scheduled for completion in 1982, will bave 1,400 beds. Total estimated contracts, value of the largest contracts of the largest contract excluding medical equipment and furniture, is £38m.

piles of varying diameter. They will be driven down 46 ft to carry loads of up to 70 tonnes.

variety of small transmission line/tower contracts have heen won by J. L. Eve Construction Innovation and Resource Centre, Northern Ireland. The unit is The largest of the building

contracts, valued at over £800,000, invoives the construction of a new three storey office block extension and basement car park, for the PSA at Redhll, One of the other awards is for the construction of a block

FOUR building contracts and a

of old people's flats at Vereker Road, Fulham, for the London Borough of Hammersmith and Fulbam. A further phase of the rehabilitation programme at Breck-

CONTRACTS worth £750,000 nock Estate, London N19, has bave been awarded to West's been obtained. The Brecknock estate work, for the London Borough of Islington, involves external and internal essential repairs to 44 flats. Additional to other works

carried out by the company for the Central Electricity Generating Board, Is a contract gained for work in connection with a major sub-statioo in St. John's Wood, London.

Various other small contracts, amounting to £150,000 bave been gained by the company's transmission division for special projects which lovolve work on the Severn Bridge, design and erection of steel towers in

PLANT AND MACHINERY **SALES**

1) ROLLING MILLS 12in x 30in x 35in wide x 400 hp Four High Reversing Mill.
5in x 12in x 10in wide variable speed Four High Mill.
3.5in x 8in x 9in wide variable speed Four High Mil.

10in x 16in wide fixed speed Two High Mill. 10in x 12in wide fixed speed Two High Mill. 6in x 6in x 20in wide Four High Mill.

2) CUT/LENGTH LINE 1,500 mm x 3 mm x 15 ton coil. 3) CUT/LENGTH LINE 1,000 mm x 2 mm.

4) CUT/LENGTH LINE 750 mm x 2 mm. 5) CUT/LENGTH LINE 400 mm x 3 mm.

6) WIRE FLATTENING AND NARROW STRIP ROLLING MILL two stand by R.W.F. 10in × 8in rolls.

7) SLITTING LINE 920 mm x 10 ton coll by Cam. 8) SLITTING LINE 300 mm x 1 ton coil by Cam.

9) SLITTING MACHINES 36In and 48in by Weybridge.

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11) GUILLOTINE 8ft x 0.125in Pearson. 12) No. 1 FICEP SCRAP SHEAR, 75 x 35 mm Bar.

13) SHEET LEVELLING ROLLS, 920, 1.150 and 1.850 mm wide. 14) HYDRAULIC SCRAP BALING PRESS. Fielding & Plact.

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Tel: 01-928 3131.

LEGAL NOTICES

THE COMPANIES ACTS 1948 TO 1978
DIRECTLIGHT LIMITED

NOTICE IS HEREBY GIVEN, pursuent to section 293 of the Companies Act 1948, that a Macting of the Creditors of the above-named Company will be hald at Winchester House, 100 Old anoad Street, London, EC2, on Tuesday, the 18th day of March 1890, at 12 noyn, for the purposes mentioned in sections 294 and 255 of the seid Act.

Deed this 20th day of Fabruary 1990.

By Order of the Board,

By Order of the Board,

J. HAYWOOD, Cirector.

i NOTICE IS HEMESY GIVEN, pursuent to section 293 of the Compenses Act 1948, that a Meeting of the Creditors of the above-named Company will be held at Winchester House, 100 Old aroad Street. London, EC2. on Tuesday the 18th day of Maich 1980, at 12 noon, for the purposes mentioned in sections 294 and 295 of the said Act.

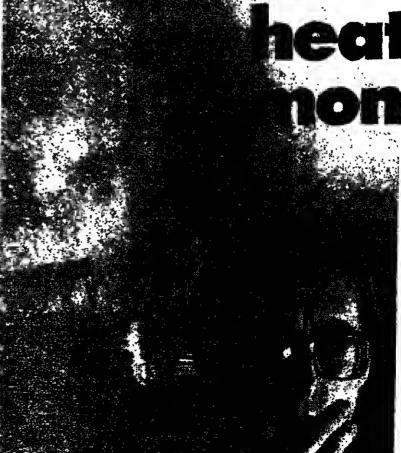
Queed this 20th day of February 1980.

Ay Brief of the Board,

J. HAYWOOD, Director.

Telex: 261771.





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Stress on scrapping 'won't regenerate profitability's

THE PRESENT balance of with the best prospects for Government policy is tilted too expansion in the future." much towards the destruction quarterly review published this

"If nothing is done, there is a danger that the UK will drift gradually but irresistibly into import controls, piecemeal to give relief where lack of competitiveness hurts most, and not to industry but, in reviewing the regenerate profitability for firms potential scope of fiscal policy, ing Requirement must remain

The institute states that it of old products and obsolete bas "long held the view that, capacity and away from the without incomes policy, fiscal creation of new capacity to pro- and monetary instruments alone duce new products, the National are insufficient to achieve the Institute of Economic and Social conventional goals of economic Research warns in its latest policy and clearly, if the entire thrust of policy were towards reducing inflation as quickly as possible, other goals would have to be foregone."

> "There is no guarantee that destruction and creation in targets impossible.

towards

getting even worse." for a reform of wage bargain- a tax cut of £2bn compared ing and some kind of social contract as on the Continent. It then examines the scope for an expansion in public sector borrowing to try to offset some of the adverse effects the monetary measures to control inflation are baving on output and a lower exchange rate would employment without making rectify the balance between attainment of the monetary

"If the Public Sector Borrow-

The review repeats the call the answer would appear to be Added Tax." with the forecast (which already assumes indexation of

> direct and indirect taxes). 1979-80 ratio by 1981-82 and the Government to proceed balf on reflation at present. Other

he a positive contribution market prices, and sterling M3 cent and to avoid the indexapreventing things may only grow at 9 per cent tion of duties or permit a belp to put some downward enced in the use of sterling M3. Group. twen worse."

during the fiscal year 1980-81, reduction in the rate of Value pressure on the exchange rate. targets and, in particular, con-

> pansion have always been first its effect on inflation and second "If the horrowing/GDP ratio its effect on the balance of payin 1980-81 hut to return to its that a cut in indirect taxes would actually reduce the rate sterling M3 were allowed to of inflation, but questions grow at the upper limit of its whether the likely size of cur-7 to 11 per cent target range, rent account deficit — probably then a tax cut of £3bn would smaller than last year—can be be possible. This would enable viewed as imposing a restraint

this year. Further, reflation will The latest review also con-

The institute notes that the tains an article on monetary control or other methods relatclassic objections to fiscal ex. policy by Mr. David Savage of the institute's staff. He argues not offer a particularly im-that "there is no simple con- proved solution." He also temporaneous relation between any such simple relation be supply tween tha change in broad

proved solution." He also maintains there is no rigid rewere allowed to rise marginally ments. The institute points out changes in monetary aggregates lation between public sector. and the rate of inflation, nor borrowing and the money

ing to high-powered money may

A further special article by money aggregates and the level Mr. Christopher Allsopp and of real activity in the economy." Mr. Vijay Joshi of Oxford f real activity in the economy." Mr. Vijay Joshi of Oxford Secondly, he argues that University surveys the main "there are no simple effective alternative strategies for the routes to the control of the UK economy put forward by 3HE.

a factor to he taken into account with roughly its same ratio of way towards its target basis industrialised countries are exmoney supply which will be the institute itself, by the substantially free of the difficult on Business School, and by the same expansion might Gross Domestic Product in rate of income tax of 25 per pecting to increase their deficit substantially free of the difficult on Business School, and by the same ratio of the difficult of the institute itself, by the same ratio of the difficult of the institute itself, by the same ratio of the difficult of the institute itself, by the same ratio of the difficult of the institute itself, by the same ratio of the institute itself, by the same ties which have been experi- Cambridge Economic Police

> analyses and proposals the anthors conclude that "there is agreement on the need for h

Review, number 91. Atmin subscription £14.00 in UK, from Trench Street, London SWIP

Stagnation, unemployment Prospects for world and inflation to continue

the economy, rising unemploy- per cent jump in 1979 and the back to £8.5bn in 1981-82. ment, a high rate of inflation savings ratio is expected to de-and a hig current account cline from 19.2 per cent in the is expected to decline in line deficit are forecast for the UK fourth quarter of 1979 to 15.4 with the drop in the level of

has resulted in a slightly more by the end of 1981. pessimistic analysis compared with last November's review; the main change is that living standards are expected to remain more huoyant than remain more huoyant than This reflects a greater stability before and that the current in the value of assets as the account deficit will be smaller. rate of consumer price inflation The main assumptions are that the exchange rate will not alter over the next two years and that hoth direct and indirect taxes are increased in line with

The key features are a decline similar decline last year. Although investment is forecast to drop by a further 1 per cent in 1981, it should turn upwards by the second half of the year.

decline in fixed investment this year is matched by destocking. This is, however, expected to be much smaller than in 1975, because the recent npturn has been less than in 1973 and the recession is likely to be not as severe.

Both import and export

volumes are expected to rise faster than the general level of expenditure with increases of 2 per cent this year and 4 per cent in 1981 and little effect on the current halance.
Public authorities' current ex-

penditure is expected to fall through this year as a result of the culs which have been announced already and then to remain unchanged in real terms

The annual average savings 15 per cent by the end of this ratio is projected to drop from year, implying a Minimum Lendabout 16.5 per cent in 1979 and 1980 to 15.5 per cent next year. is expected to fall in and after the second half of 1980—down from an average of 15.8 per cent this year to 13 per ceot in 1981. Consumer spending is pro-

Decline

Total output, as measured hy real Gross Domestic Product, is forecast to decline by 0.5 per cent in 1980 hefore recovering by 2 per cent next year. The rise In output is, how-

ever, unlikely to be sufficient to halt the rise in unemployment with the adult seasonally adjusted total for Great Britain projected to rise to nearly 1.6m at the end of this year and to more than 1.8m by the end of 1981. Even this bigh figure is on the expectation that producthe growth will continue to be likely to be ferrous metals—shearsh.

The current account deficit is projected to decline from 12.4bn last year to £1.8bn this year and to £1.7bn in 1981. during 1981.

Real personal disposable in expected to rise from £3.7bn in 6 per cent this year and by 2 comes are projected to rise by the current financial year to per cent in 1981.

SUMMARY OF FORECASTS

(November projections in brackets)

The demand for hank lending this year by the institute. per cent in the same period of activity so that the Treasury

The recent rise in oil prices this year and to 14.7 per cent Bill Rata should fall from its present level hut only to about

> ing Rate of 151 per cent. The review also examines the effect of various Budgetary measures on the economy. It notes, among other points, that changes in public expenditure are more effective in changing real activity in the economy

than are similar alterations in public revenue. jected to rise 2.7 per cent this year and by 3 per cent in 1981 pects for industrial production when it will be a major contri-A special article on the prosin investment by a further 4 when it will be a major contri-per cent in 1980 following a butor to the recovery in overall years the growth in the share of personal consumption in final demand is expected to permit as food, drink and tobacco, clothing, furniture and publisbing and the repairs side of construction) to grow at rates similar to those of the past.

In contrast, those industries which depend heavily on exports or on investment will have falling output in 1980 with little rise in 1981. The institute expects manu-

facturing and total industrial output (excluding oil) to fall hy 1 to 13 per cent this year and to rise by roughly 1 per cent in Worst affected sectors are

1981-nd shipbuilding, down a tenth in both years. Mechanical engineering

economy 'gloomy'

inflation, and massive current while the OECD countries' account deficit for most of the halance will swing over the two industrial world, according to years from a surplus of \$11hn to the special article on the world a deficit of \$70bn. economy in the latest institute

Aggregate output in the 24 countries of the Organisation for Economic Co-operation and Development area is projected to rise by 1.2 per cent this year following an increase of 3.2 per cent last year.

At the same time, the annual rate of consumer price inflation is projected to rise from 10.1 per cent last year to 11.5 per cent in 1980.

"While the prospect might be somewhat different had different domestic policies heen adopted, the gloomy outlook stema essentially from the huge increase in the price of oil, which in little more than a year has doubled." the consumer industries (such • Between 1978 and 1980 oil volume of world trade possibly exporters will increase their accelerating a little.

Total OECD

Oil exporters

Other developed

THE NEXT 12 months will he surplus on current account by a period of slow growth, rapid \$125bn to an estimated \$139bn

Over the two years together (though not individually) this is a bigger swing than took place in 1974, even at constant prices and in relation to OECD countries' output (which has increased hy about one sixth in real terms since 1974)."

Because oil exporters' imports will increase, world trade may not suffer very severely. The institute projects an increase in volume of 44 per cent for total trade and of 6 per cent for trade in manufactured

In 1981, the institute expects the growth of OECD output to recover to at least 21 per cent less than 10 per cent and the

CBI forecasts tighter squeeze on industry

CURRENT ACCOUNT BALANCES

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

detailed forecasts by Confedera-tion of British Industry econo-mists, published today in the are a 2 per cent drop in total

profits, high interest payments, adult unemployment up to 1.7m, going abroad and with investment high, though felling, the financial deficit for industrial and commercial companies is projected to rise from over £5½bn last year to nearly £7bn

This will probably be met by

INDUSTRY FACES a tightening increases in bank borrowing of financial squeeze this year, say more than £50n in the current

CBI Economic Situation Report. output, as measured by real Mainly as a result of weak gross domestic product, this year and a rise of about 400,000 in seasonally adjusted, fourth quarter. A smaller fall in output but more unemployment are expected in 1981. in current account deficit, mainly from North Sea ofl, with inflation rate declining in the second half.

A large reduction is forecast for more reasonable attitudes

" Developments ln current pay round and most

close to £10bn if monetary

growth is to be held down, the

Budget should he neutral as far

as fiscal policy is concerned

after adjusting for inflation. The

Government may therefore have

ment of personal tax allow-

case for restricting the degree

rather than 17 per cent since the rise in prices due to the increase in Value Added Tax

was taken into account in the

There is a good case for

reducing employers' national

there would have to be savings

alsewhere. Without a more

radical approach to public

spending, the Government is

unlikely to be able to make

public sector borrowing and

the growth of the money supply.

This is seen as "an essential

step towards a stable environ-

ment in which economic agents

can operate without fears of a

sudden recurrence of rapid

The authors also examine two

recent arguments on the issue.

The first is that there is no con-

nection between public sector

borrowing and the growth of the money supply and the

second is that nominal borrow-

ing provides a misleading pic-

ture of tha Government's fiscal

the second argument is largely

to reduce the rate of inflation.

contributions but

June Budget.

Insurance

The authors say there is a

forecasts suggest that progress in reducing substantially the underlying rate of inflation will

on UK

"Given the strong inflationary pressures, the Government's policy of firm control of monetary growth with a consistent fiscal policy is essential.

'Although much depends on

the circumstances and past history of individual countries, some experience elsewhere sug-gests that discussion between the authorities and the social partners may be able to help promote better understanding of the scope for wage increases and thus improve the hasis for more satisfactory price and growth performance."

"But it is likaly that the growth potential will remain largely unexploited unless the growth in nominal wages is moderated, until the competitiveness and responsiveness of the economy improve and a greater sbare of national incoma Is shifted to profits and investment, thus creating the conditions for a dynamic process of non-inflationary growth and a

gloomy assessment of recent performance and generally cheerless forecasts for 1980. OECD points both to recurrent inflationary pressures and to inbibitions on performance from a "lack of steadiness in management of the economy." The forecasts reflect the general downgrading in OECD

Dr. Budd and Mr. Dicks yearly Outlook in December, restate the case for a medium, after the further rise in oil term financial plan related to prices The projections assume that there will be no significant

change in UK policy. The fiscal stance will be

cast decline in output, the built-in fiscal stabilisers would tend to raise public-sector borrowing to about £10½bn, which would be broadly the same in real terms as the level expected in 1979-80.

After surveying the verying

provements on the supply side of the economy. The contentions question is whether pansionary policies are needle National Institute Economic

TUC'S 1980 ECONOMIC REVIEW

Expansionary Budget 'needed to reverse monetarist failure'

BY ALAN PIKE, LABOUR CORRESPONDENT

AN EXPANSIONARY Budget is needed to begin to reverse the slump and halt the rise in unemployment, the TUC argues in its 1980 Economic Review published yesterday.

Surveys of economic pros-pects, public expenditure and industrial policy lead up to TUC demands for an alternative strategy to the Govern-ment's "single-minded monetarist policy" which, argues the review, is no answer to the problems of the United Kingdom economy. "Indeed, this policy has resulted in a failure to meet any of the four haste objectives of economic policy—full employment, economic growth, stable prices and a halance of overseas pay-ments."

Government action, says the TUC, has added 81 per

cent to price increases from mid-1979 to mid-1980. Public spanding policies were adding to deflationary trends, and the Government's attempts to cut public borrowing would be self-defeating and merely deepen the slump. The Government should plan public spending against a medium-term plan for sufficlent growth to bring the economy back to full employment, rather than against an arbitrary figure.

The review concludes that in a modern industrial economy with a large public sector, multinational compowerfăi financial institutions and a strong and free trade union movement "the idea that competition and the free play of market forces can provide the means for allocating resources is little short of naive."

There should, says the TUC be a Budget announcing pen-sion and child benefit in creases in November by more than the rise in the cost of living. Cuts in public services. such as education and health should be reversed. A com-prehensive system of capital taxation should be retained, and, in addition to an increase in tax thresholds in line with inflation, the reduced rate of tax should be cut to 20 per cent and the band extended

On industrial policy, the review calls for selective and temporary import controls and policies which would increase not reduce, finance for the Manpower Services Commission and National Enterprise Board, industrial and regio assistance and investment by

OECD hints at value of winning trade union pay co-operation

OECD OUTLOOK FOR 1980

Percentage volume changes at-

1980

Second half 1980

on second half 1979

TACTFULLY-WORDED hint that the Government should talk to the trade unions about the scope for wage increases is given this morning by the Organisation for Economic Cooperation and Development in its annual survey of the UK

economy.

The OECD stresses that the key to an improvement in the UK's recent "disappointing" UK's recent "disappointing" performance lies in a reduction in the rate of inflation. Gross Domestic The report says that the full effects of the Government approach of strict monetary control will not immediately Consumer prices 161 Source: OECD Economic Survey become apparent, and it will be some time before a balanced

indgment can be made. The extent and duration of tight policies will obviously depend on how long it will take toward pay formation to

The report notes that the UK is fortunately placed in baving large scope for higher produc-

sustainable increase in living standards."

Conclusions

These conclusions follow a significant further cuts for expectations about world pros-1980-81. expectations about world pros-pects since its last balf-

restrictive, with public spend-ing in real terms falling somewhat faster than planned to make place for the expected high pay settlements in the public sector. However, because of the fore-

This assumes a rise in per-

They maintain that the first sonal income tax allowances argument is mistaken and that in line with inflation, but no account is taken of any similar irrelevant at a time when the rise, or valorisation, of customs Government's prime objective is and excise duties. Monetary policy is also ex-

growth of sterling M3 at the upper end of the official target range. A small fall in interest rates, reflecting weeker credit demand, is built into the forecasts, but at the end of 1980 they will probably remain at unusually high levels.

Largely because of a substan-tial improvement in real foreign balance (an unchanged ex-change rate is assumed) the trade account is expected to move from a \$61hn (about £3bn) deficit in 1979 to near

balance this year. The increase in North Sea oil production between 1979 and is estimated at about \$46 (£13bn) and will account for more than half the improvement in the current external account over this period. The deterioration in the invisible account is also expected

to come to a halt in 1980, giving a small current-account surplus for the year as a whole. "Developments this year will be largely influenced by the level of pay settlements, an are in which there is much uncertainty at present."

The forecasts reflect the techassumption : that the growth of average earnings to the end of 1980 will be broadly the same, about 17 per cent, as the underlying rate in the year to the and of 1979. This, combined with a fall in output, should lead to an acceleration in rate of growth

of unit lahour costs to 19 per

This will further compress company profits; excluding North Sea oil, the latter's share in gross domestic product is expected to decline from Si per cent in 1978 to less than 7 per cent in 1979, and to nearly 6 per cent in 1980. The previous lowest was 63 per cent in 1975.

The underlying rate of growth of consumer prices, which er-cludes the mechanical effects of the July, 1979, increase in indirect taxes, is expected to stabilise at about 151 per cent in 1980, about two percentage points more than the underlying rate of growth through 1979. Including the indirect to rises, the year-on-year rise in consumer prices is expected to average 16; per cent this year. The growth of real disposable income is forecast at 1 per cent

this year, compared with 5 per cent in 1979. Partly for precautionary reasons related to expecte also with the aim of limiting the decline in the real value of liquid and semi-liquid accets, the personal savings ratio is expected to rise slightly further

this year Accordingly, consumer spend ing is expected to remain at about last year's level.
All the main components of private investment are expected to decline this year.

Gross domestic product is forecast to decline by about 2 per cent, 21 per cent if North Sea oll is excluded. On the assumption that as in

the last two years the labour force will continue rising at less than I per cent annual rate. the unemployment rate should reach about 7 per cent at the end of 1980, roughly 1.7m, tom-pared with 51 per cent at 100 end of last year.

the United Kingdom, at

5.4 (S.4) 1.23 (1.21) 10 (11) 11.9 (12.0) -24 (-31) 2.8 (1.9) 1.58 (1.42) 9 (9) 15.8 (16.3) 9 (9) 13.0 (13.4) 1.7 (1.6) 1.84 (1.59)

0.6 (0.4) -0.5 (0.2) 2.0 (1.9)

1981

-1.8 (-3.3) 9.0 (9.0) -1.7 (-2.5) 8.5 (8.3)

PETER RIDDELL ON THE LONDON BUSINESS SCHOOL'S ECONOMIC OUTLOOK Two-figure inflation for two years

at least two years, though it should start to slow down from process, output will suffer and real Gross Domestic Product next year than at the end of last year. This is the central theme of the new Economic Outlook from price increase. The Business School says the

ing. It is directed by Dr. Alan Budd, who took over at the end of last year from Professor Terry Burns, the Treasury's chief economic adviser. The Outlook suggests there will be a painful and fairly gradual process of adjustment as both the UK and the rest of the world try to shake off the

the London Business School's

Centre for Economic Forecast-

latest upsurge in inflation. Only North Sea oil throws any light on the gloomy picture.

The Business School gives a warning that the prospects for the next four years will be considerably worse than for the last four. The annual growth of real Gross Domestic Product is projected to decline from 2.3 per cent in 1976-79 to 0.9 per cent in 1980-83. On the same comparison, average consumption, growth is expected to slacken from 2.1 to 0.6 per cent, while the current account deficit will rise from an aver-

age of £600m to £1.9bn. One result is an expected rise in unemployment from an annual average total in Great Britain of 1.24m last year to 1.48m this year, 1.82m in 1981, 2.04m in 1982 and 2.14m in

The combination of recession, fairly rapid inflation, a bigh exchange rate and a tight monetary squeeze is likely lo mean a sharp squeeze on profits, particularly in the non-oil per cent this year, with only a

Profits—after excluding both a srong recovery in 1982 and Private fixed investor stock appreciation and North 1983. World rade, which grew Sea oil operations—are forecast by more than 6 per cent last to decline by 59.1 per cent this year, Is expected to rise by 1 per year compared with last, and to drop by a further 9.3 per cent in 1981. The projected total in the UK, the main shortfor next year of £3.9bn compares with £11.24bn in 1978. The forecasts are elightly price inflation. In the longer-

drop in Gross Domestic Product of 1.7 per cent this year, compared with the previous forecast of a 1.1 per cent drop. Similarly, there has been an upwards revision of the inflation forecast. The main change since November has been another oil

biggest question mark over the short-term future of the UK economy concerns the value of sterling. The pound is considerably stronger than would be suggested by traditional foreeasting relationships, with UK relative wholesale prices some 30 per cent above trend. While some of the pound's recent strength is undoubtedly justified on a long-term hasis by North Sea oil, it seems likely that the exceptional uncertainty about the future of

oil prices has pushed sterling ahove its sustainable long-run equilibrium." As there are no offset by a higher inflation prospects for current account capital inflows. 'Unless there are some early signs of a sustained improve-

ment in UK inflation, it is difficult to believe that these inflows will continue or indeed that the funds will be left in this country." The Business School notes ports are expected to rise by 41 the possibility both of a weaken- per cent between last year and

ing of spot crude oil prices and this, virtually no growth is foreof a fail in UK interest rates. cast this year. This is because Consequently, the Outlook says of the distorted pattern last the effective exchange rate will start to decline this year and to drop by 5.9 per cent next year, hy 4.7 per cent in 1982 and by 3.7 per cent ln 1983. World industrial output is projected to drop by ahout 1.7

small pick-up next year before

term influence on earnings has been the accelerating rate of

THE INFLATION rate will not gloomier than those produced term, the Business School be-year, with a low first balf exbe hack below 10 per cent for last November. They predict a lieves the forces of world comports and a higher level in the petition will bring UK pricesand hence earnings-into line

with those of competitors. "Unless the process is assisted by a rapid fall in the exchange rate (which is not anticipated) the adjustment will he protracted and will have severe short-term costs in terms of unemployment and low profits. Provided that the profits. growth of the money supply is kent below 10 per cent a year, the Business School forecasts that the increase in earnings will slow down from the second half of the year."

The growth of real incomes has slowed considerably as prices have caught up with earnings. Real disposable income is forecast to drop slightly this year and next with little growth thereafter. Little change is expected in the say ings ratio this year as the effects of a fall in real income are rate. Consumption is projected surpluses for the next four to drop slightly, though from years, the strength of sterling next year onwards the slow seems to depend entirely on down in the inflation rate is expected to reduce the savings ratio, and consumer spending is

projected to rise by 11 to 2 per The fall in consumption this year is expected to produce a much slower growth in imports than last year. Although exsecond half.

Monetary growth is expected to slacken this year; the main impact of the sharp reduction in public horrowing in calendar 1980 on calendar 1979 (in con-trast to the different pattern tween financial years) should be felt on interest rates. The Outlook also contains a special article by Mr. Bili Robinson and Mr. Peter War-

burton on the management of

currency boldings during the floating rate period. This con-siders the risks and rewards which have heen associated with foreign exchange various The study, which is by defini-tion hased on an examination of past movements which could be reversed, suggests that in the period when the world was learning to cope with floating exchange rates, international capital markets were not perfectly efficient. As long as inefficiencies remain, the study suggests that the money manager would ba wisa to minimise his exposure in

in currencies offering the highest positive real rate of Economic Outlook 1979-83. volume 4 number 5. February 1980. Annual subscription rate Gower Publishing, 1. Westmend. Farnborough, Hampshire GU14 cent.

foreign currencies offering low

or negative "real" rates of

interest, and maximise exposure

No scope for easing budget fiscal policy

THERE IS NO scope for a income tax allowances and sperelaxation of fiscal policy in the cific duties are increased in line Budget, Dr. Alan Budd and Mr. with inflation and that the UK Geoffrey Dicks of the London contribution to the EEC will he Business School argue in their cut by £500m. But this is before taking account of any fur-ther spending cuts.
Since borrowing should be Economic Outlook.

The authors say the monetary target for 1980-81 should be a growth of sterling M3, the broadly defined money supply,

of about 8 per cent. This would require public sector borrowing of about £10hn in 1980-81 if output falls by 2 ner cent. Such an amount would be Domestic Product at market prices which is slightly higher than in 1979-80. Borrowing can he higher if the recession is more severe than expected. The article concludes that tha " choices facing the Chancellor are so painful that there is probahly little risk that the Government will insist, for some misguided reason of prestige, on

reducing borrowing below this year's level. But it must also avoid the temptation to believe that it can risk an expansionary Budget in the hope that the

financial arithmetic will somehow come right." The Business School's central forecast is for a fall ln output of 1.7 per cent in 1980, pro-1980. Annual subscription rate ducing borrowing of about in UK £48. Available from £10.7hm in 1980-81 and money supply growth of about 9 per cent. This is based on the assumption that both personal

Percentage annual change in real terms 1.3) 1.5) 1J (- 02 (- 1.1 (0.4 (3.3 3.8 25 (

LONDON BUSINESS SCHOOL FORECASTS (November projections in brackets)

– 0.7 (- 4.1 (- 4.5) 4.5 (4.2) 0.8 (- 1.1) 1.7 (15.5) 29 (22 (23 (24 (9.0 (1.5 0.4 0.8 11.2 7.7 (9.6 (

Current account (fbn)

المكذامن الديمل

(excluding dwellings)

Exports

IVESTIME :

OECD Economic Survey from the Stationery Office

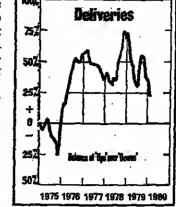
FT Monthly Survey of Business Opinion

GENERAL OUTLOOK

Confidence still at low level

CONFIDENCE ABOUT general business prospects remains at a very low level. There was no change last month in the index of optimism about the general business situation, which remains at its lowest for about three-and-a-half years.

Of the three groups of industry interviewed for the survey, the engineering sector was generally less pessimistic than il had been when last ques-tioned in October, while the chemical and oil group, together with shipping and transport companies were more gloomy. The percentage of companies



saving that they are "fairly pessimistic" coutinues to rise and now stands at 20 per cent against unly 7 per cent last Yovember

The steel strike and the general downturn in economic activity were the main factors depressing confidence. Competition from abroad as well as high interest rates made for general pessimism in the chemicals and oil sector, although one company claimed that North Sea oil production was a bright spot. The index of optimism about the UK economy continued to

ATURIDA POSIMES SITURISM							
	4 1	nonthly	moving t	otal	Eng's.	bruary 19	780
Are you more or less optimistic about your Company's prospects than you were four months ago:—	Nov- Feb.	Oet Jan. %	Sept Dec. %	Aug Nov.	(non-	Chems. & Oils	Ship.

EXPORT PROSPECTS (Weighted by exports)

More optimistic

Less optimistic

Neutra

GENERAL BUSINESS SITUATION

	4:	monthly	moving t	total	Fe Eng's.	bruary 1	780
Over the next 12 months exports will be:-	Nov Feb. %	Oct- jan. %	Sept- Dec. %	Aug- Nov.	(non-	Chems. & Oils %	Ship. T'sport.
Higher	48	52 ·	59	61	28	46	45
Same	30	29	29	23	36	28	23
Lower	22	18	11	15	36	26	32
Don't france							

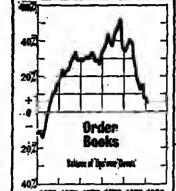
ORDERS AND OUTPUT

Renewed slump in orders

THE INDICES measuring new orders, order levela and recent deliveries all showed declines. Engineering companies cited the strong pound and the increase in oil prices as factors depressing deliveries.

Both this sector and the chemical and oil group also reported lower incoming orders. The general economic downturn, high interest rates, lower spending by lucal authorities and a fall in Iranian business were all blamed for the reduction.

The chemical and oil sectors pointed to a shortage of feed stock chemicals, and gas prices were still thought to be too Lower demand for shipping and transport was caused by general economic conditions;



1975 1976 1977 1978 1979 1988

but there was some offsetting increase in charter activity. The index of export prospects fell back, with the drop particularly severe for the engineering and transport connected sectors, which have higher exports lu relation to their market capitali-

sations. Engineering companies men tioned the strong pound, price competition overseas, and delivery problems due to the engineering and now the steel strikes as main factors depressing exports.

The index for the median expected increase in turnover over the next 12 mouths dropped back to 4.8 per cent from 4.9

NEW	ORDERS	

	4 monthly moving total				February 1980		
The trend of new orders in the last four months was:	Nov Feb.	Oct jan. %	Sept Dec. %	Aug- Nov.		Chems. & Oils %	5hip. Tsport.
Up	31	34	36	37	23	47	56
Same	21	18	18	20	38	3	41
Down	13	7	21	8	29	37	
No answer	35	41	35	35	10	13	3

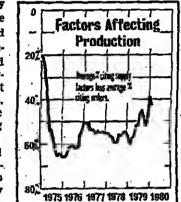
PROBUCTION/SALES TURNOVER	4 :	monthly	maving t	etal	Fei	bruary 19	nan
Those expecting production/sales turn- over in the next 12 months to:	Nov Feb.	Oct.	Sept- Dec.	Aug- Nov.	Eng'g. (non- elect.)	Chems.	Ship. T'sport.
Rise over 20%	5	3	3	6	1	13	
Rise 15-19%	5	3	5	3		13	28
Rise 10-14%	16	22	15	12		7	6
Rise 5-9%	16	17	20	23	5	7	56
About the same	48	46	57	50	92	47	10
Fall 5-9%	1	1	1	1			
No comment	9	8	5	5	2	13	

CAPACITY AND STOCKS

Better capacity use

THE INDEX for capacity utilisation continued to move slowly upwards. This reflected a fall in the number of companies in the chemical/oil and snipping/transport sectors saying they were operating at below planned output levels. which more than offset a rise in the engineering firms giving

In both the chemical/oil and shipping/trausport groups, companies were more inclined to a shortage of orders. Demand,



as opposed to supply, factors are thus becoming more important in determining out-

The indices for the expected changes in stocks of raw materials and work in progress over the next 12 months have tended to drop. This was primarily a result of forecasts for lower stocks in the chemicals and oil sector.

The index of stock levels has moved up slightly, mainly because of a feeling amnng the chemicals and oil companies that stocks are too high.

CAPACIT	TY WO	RKING

		4 month!	nonthly	moving t	otal	February 1980		
· .		Nov Feb. %	Oct.	Sept Dec.	Aug- Nov. %	Eng'g. (non- elect.)	Chems. & Oils	Ship. Tsport.
	Above target capacity	14	14	12	10		20	-
	Planned output	54	51	50	49	34	63	72
	Below target capacity	30	33	36	37	66	17	28
	No answer	. 2	2	. 5	4	-		
				_				

STOCKS

	•	monthiy	moving t	10(21	Eng's	tornary is	780
aw materials and components over the ext 12 months will: Increase Stay about the same Decrease No comment anufactured goods over the next 12 onths will: Increase Stay about the same Decrease No comment	Nov Feb. %	Jan.	Sept- Dec. %	Aug Nov.	(non- elect.)	Chems. & Oils %	5hip. T'sport. %
Increase	21	25	28	29	57	13	28
Stay about the same	39	39	43	47	30	. 30	37
Decrease	25	24	20	la	19	40	
No comment	15	12	9	-6	-	17	34
Manufactured goods over the next 12 months will:					1		
Increase	74	26_	26	22	52	74	. =
Stay about the same	36	33	38	43	22.	53	62,
Decrease	15	14	13	11	3	20	1
No comment	25	27	23	23		13	37

FACTORS CURRENTLY AFFECTING PRODUCTION 4 monthly moving total

					Eng g.			
	Nav Feb. %_	Jan.	Sept Dec.	Aug Nov.	(non- elect.)	Chems. & Oils %	Ship. T'sport.	
Home orders	69	64	68	58	79	83	41	
Export orders	43	41	52	54	89	63	84	
Executive staff	9	12	7	7				
Skilled factory staff	25	26	25	26	42	27	.6	
Manual Jabour	8	6	4	5		IJ		
Components	15	14	11	11	41	20		
Raw materials	9	11	13	16	51	13		
Production capacity (Plant)	11	7	8	7	10	30		
Finance	2	2	2	2			6	
Others	10	6	7	7	16	27		
Labour disputes	31	30	33	38	63	40	34	
No answer/No factor	7	8	7	7			3	

4 monthly moving total

4 monthly moving total

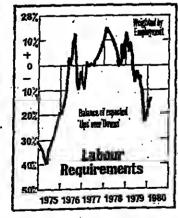
INVESTMENT AND LABOUR

Lower spending planned

INDUSTRY continues tu project lower capital spending over the next 12 months. This is mainly because of lower planned expenditure in the chemicals and oil sector. The index for forecast capital investment is new at its lowest fur over three

More companies in all three sectors complained that their liquidity levels were generally too low. Nearly one quarter of all the firms interviewed gave this response.

Both the engineering and the chemical/oil groups said that their reliance on outside



finance was increasing, so this index bas also tended in move upwards.

Companies contacted were aomewhat more inclined to taka on more labour over the next 12 months, mainly because of better employment prospects in the engineering sector. As a result, the index of labour requirements showed a further levels of the end of last year. Both the engineering and the

chemical/oil groops were more inclined to mention lack of present or forecast demand as factors affecting labour take-up.

LABOUR	REQUIREMENTS	(Weighted	by	employment)

Those expecting their labour force over the next 12 months to:—	Nov Feb. %	Oct Jan. %	Sept Dec.	Aug Nov. %	(non- elect.)	Chems. & Oils %	Ship. Tsport.
Increase	22	23	15	15	6		
Stay about the same	38	36	47	44	40	78	25
Decrease	35	39	36	38	54	22	
No comment	5	2	2	3			75

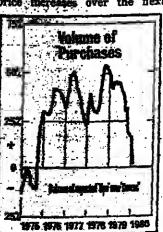
CAPITAL INVESTMENT

(Weighted by capital expenditure)

	. 4 :	nonthly	otal	Eng's.			
Those expecting capital expenditure over the next 12 months to:	Nov Feb. %	Dct Jan. %	Sept Dec. %	Aug Nov. %	(non-	Chems. & Oils %	Ship. T'sport.
Increase in volume	26	34	38	38	43	40	
Increase in value but not in volume	. 16	9	11	16	22		65
Stay about the same	17	15	17	17	23	18	
Decrease	26	23	20	20	8	41	31
. No comment	15	19	14	9	4	1	4

COST AND PROFIT MARGINS

Price outlook improves



I months than they had done pur months ago, with the decian forecast rise down to 42 per cent against 152 per cent. This was the first drop in the level of expectations since

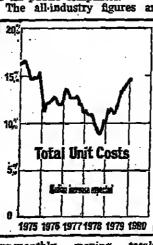
months. All three sectors said around 141 and 174 per cent of all public companies. they expected slightly luwer respectively. The engineering price increases over the next and shipping/transport groups were more pessimistic about the level of wage increases, the oil

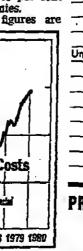
and chemicals sector less so. The oil/chemicals sector was as a result more hopeful about improving profit margins over the next 12 months. However. since the other two sectors were less optimistic, the profit margins index shows no change. Questioned about their artitudes to high wage claims, the companies interviewed showed a slight weakening in their likely response compared with four months ago. Less than half the firms said they would definitely resist such claims, against

interviews with top executives. every second month).

Three sectors and some 30 Complete tables can Three sectors and some 30 Complete tables can be pur-companies are covered in turn chased from Taylor Nelson and every month. They are drawn Associates.

The median expected in from a sample based upon the less gloomy shout the cost and creases in unit costs and wages FT-Actuaries' Index, which price particols over the next 12 showed virtually no change of accounts for about 60 per cent The all-industry figures are





around two-thirds last time.

These surveys, which are carried out for the Financial Covering some 120 companies in 11 industrial sectors (mechanical matter). Times by the Taylor Nelson 11 industrial sectors (mechanical matter) with the executives.

COSTS

Wages rise by>		Nov Feb.	Det Jan. %	Sept Dec. %	Nov.	elect.)	Chems. & Oils %	Ship. T'sport.
	10-14%	18	15	18	21	25	27	3
	15-19%	46	37	37	32	73	50	57
	20 24%	14	11	10	10		17	6
	25-29%	_	1	1	1			
•	Same		1	1	1			
·	No answer	22	35	33	3\$	2	6	34
Unit cost rise by:								
	0-4%	ĭ	2	1	1			-
	5-9%	3	5	4	4	1		28
	10-14%	35	33	41	43	47	40	31
	15-19%	29	29	28	27	35	. 27	29
	20-24%	7	8	6	5	10	3	
	25-29%							_
	Decrease			2	2		_	-
W. 51	No answer	25	23	18	18	7	30	6

PROFITS MARGINS							
	4 :	menthly	February 1980 Eng'g.				
hose expecting profit margins over the lext 12 months to:—	Nov Feb. %	Oct Jan. %	Sept- Dec. %	Nov.	(non-	Chems. & Oils %	Ship. T'sport.
Improve	32	31	24	79	27	33	37
Remain the same	40	40	41	37	56	17	35
Contract	25	25	29	27	16	37	78
No comment	3	4	6	7	1	13	

Building control changes urged

BY OUR INSURANCE CORRESPONDENT

BEFORE Christmas the Secre- risks they already cover. tary of State for the Envirou-House Building National Council for building control system changes "to stimulate public discussion and debate. Michael Heseltine

emphasised that he bad at that stage no commitment to any safety should be maintained. At present there are 389 en- structed.

Mr.

forcing authorities and some 4,000 building control officers beavering away, supervising observance of the Public Health Acts and a multitude of regula-

reformative purpose seems to be to transfer, as far as possible, the control of standards from the public to the private sector, with consequent saving to local and regional government and, hopefully, a reduction in the potential finan-cial liabilities arising from the

existing system. in private housing, the NHBC's inspection functions to some degree already duplicate work done by local authorities. In his pre-Christmas speech, Mr. private housing and consider in detail several practical opera-

Seemingly some responsibility would have to remain with local or regional authorities, but he suggested "certification by qualified designers and engineers which would be backed by insurance."

This apart, insurers must be interested from both material damage and liability standpoints in bis ideas. They will be watching the development of firm profer t reduction in standards, no consequent increase of hazards in Heseltine.

Assuming a greater burden on ment put several ideas to the designers, engineers and so nn. where stands the insurance market at the Negligence cover is widely available to protect against personal injury claims and claims for damage to property other than

the building in question. But what might be called particular proposal, but was defective workmanship insur-determined minimum building ance is not available to enable standards for public health and contractors to put right defects in buildings they have con-

> So the certification idea poses considerable problems for insurers and the size of the problems grows in relation to any contemplated guarantee

Objectively, 10 years might be thought to be the minimum and every insurance mind must ing a defects guarantee, enforce-able in 1990 in that year's inflated pounds, but financed by premium collected in 1980

If the NHBC had greater private housing responsibility, the council would presumably think it necessary to return to the insurance market for greater protection. The council had Heseltine, asked the council if cover from 1965 until 1978 when it could in principle assume it decided to form its own insur-responsibility for control of ance company to back the NHBC

It would scarcely seem prudent to subject that company tional problems.

But there is no similar organisation to the NHBC to become a watchdog for commercial and industrial building. Mr. to pick up any long-term Heseltine said, there is no ready made solution to hand.

prudent to subject that company to the financial uncertainties of wider responsibility. But, again, would insurers want to step in to pick up any long-term liability?

Liability apart, insurers have

a positive axe to grind, particularly in the domestic sector where subsidence cover is generally provided. They consider there is urgent need for better control over the

improving standards for design of foundations on sub-standard Insurers will continue in press

for these changes, irrespective posals to ensure there is no of how the debate goes on the wider issues raised by Mr.

APPOINTMENTS

February 1980

February 1980

February 1980

Lazard Brothers board post for J. W. Glanville

appolited a director of companies. Mr. Stanley J. Row-LAZARD BROTHERS. Mr. Glan-land becomes deputy chairman ville, a U.S. citizen, is a seneral of Dollond and Aitchison Group.
partner in Lazard Frères, New Mr. Howell continues within the York. He is a director of Halliburton Company, International Jessen (UK) and retains bis minerals and Chemical Corporapublic relations position for the york. He is a director of Halli-burton Company, International Minerals and Chemical Corpora-tion and the Offsbore Company, and a trustee of the California Institute of Technology. As previously announced Mr. D. Melnertzhagen bas now resigned as a director of Lazard Brothers

Mr. C. G. Dummer bas joined the Board of SEARS ENGI-NEERING as chief executive. The company is a subsidiary of Sears Haldings and Mr. Dummer will be responsible for the engineering activities of the Sears Holding group of companies. He was formerly director of industrial operations at Dana-Europe.

The following appointments bave been made in HAWKER SIDDELEY companies: Mr. J. M. Durber becomes chairman of South Wales Switchgear, Mr. R. A. Grierson, deputy chairman, and Mr. A. L. Wolfendale, managing director. Mr. D. A. Stack joins that Board and Mr. G. J. Clarke has been made finance Clarke has been made finance director. Mr. Durber has also been appointed chairman and Mr. Grierson, deputy chairman, of Brush Switchgear, and Mr. A. L. Wolfendale jolus the Board of the company. Mr. T. W. B. Sallitt takes over as chairman and Mr. Grierson, deputy chairman, of Brush Power Equipment and Brush Fusegear. Mr. R. P. Hampson is Fusegear. Mr. R. P. Hampson is now managing director of Electric Construction and Mr. R. G. Ayres, production director, of Brush Electrical Machines.

Mr. Clive G. Stone has been man of DOLLOND INTER- James Robertson and Sons pre-NATIONAL. Mr. Cyril Howell serve manufacturers in his bas retired as chairman of the capacity as fluance director.

Mr. J. W. Glanville bas been two concerns and the associated group to advise on special pro-jects.

JOHN PLUMER AND PARTNERS, which has been granted Lloyd's broker status by the Lloyd's broker status by the Committee of Lloyd's, bas appointed the following addion reaching retirement age. tional directors with responsibi-lities for insurance and rein-surance business in the UK and overseas: Mr. R. N. L. Helman, overseas: Mr. R. N. L. Helman, Mr. D. N. Langley, Mr. R. H. Pikett. Mr. L. Ryder-Smith (marine): Mr. D. E. Parker, Mr. J. T. Walden: Mr. H. J. Whitlock (oon-marine): Mr. T. L. W. Evans [aviation). Mr. T. McEwen has become finance director.

Mr. Rrian R. Bentley is now director North West Europe for KEPNER-TREGOE following the resignation of Mr. Richard S. Handscombe. Mr. Norman Wood has been appointed secretary of the ROYAL LONDON MUTUAL INSURANCE SOCIETY. Mr. Peter Kiernan has been

appointed sales director for MASSON SEELEY AND CO, Downham Market, Norfolk. Mr. David R. Fairbairn has

been appointed director of the NATIONAL COMPUTING CENTRE. He is at present director of marketing, EMI

Mr. N. A. McBrien, group chief accountant of ROBERTSON FOODS, has become secretary to the company. He succeeds Mr. appointed chairman and chief the company. He succeeds Mr. executive of the DOLLOND AND J. M. Bradbury, who is mnving AFTCHISON GROUP and chair to the Manchester factory of

LOCAL AUTHORITY BOND TABLE

gross	pay-	Mmimun sum	bond
<u></u>		<u>.</u>	Year
15 <u>4</u>	}-year	5,000	1
. 15k	1-year	1,000	1
145	i-year	200	2-3
14	}-year	200	5-6
	gross interest % 154 151 142	gross pay- interest able % 15‡ ½-year 15½ ½-year 14½ ½-year	### 151 1-year 5,000 151 1-year 1,000 141 1-year 200

Public Works Loan Board rates Effective from February 23

Up to 5 Over 5, np to 10 ... Over 10, up tn 15... Over 15, up to 25... 15 14? 148 *Non-qunta loans B are 1 per cent higher in each case than non-quota loans A. † Equal instalments of principal. ‡ Repayment by half-yearly annuity (fixed equal half-yearly payments to include principal and interest). § With half-yearly payments of interest only.

Lex Service ...Mar. 8 Final 2.7 Lilley (F, J. C.)...Apr. 5 Finel 1,675

*Midland Benk......Mar. 14 Final 9.942

Morgan Crucible...Apr. 5 Final 2.237

Mucklow (A. and J.)...Mer. 23 Int. 1.32

Tonks...Mor. 23 Int. 1.5 News Intl.Mar. 29 Final 6.48

Property...Apr. 4 Int. 1.0

Phoenix
Asson...Apr. 4 Finel 8.445
PrudentielMar. 25 Finel 5.263
Reckit and Colman...Apr. 2 Finel 6.663

Samuel Props...Mor. 29 Int. 1.0
Sevoy Hotel ...Apr. 3 Finel 1.892
SchrödersMar. 28 Finel 8.775
ShollMar. 9 Finel 6.986

ShollMer. 9 Final 0.385 Slough Ests. ...Mer. 28 Final 1.529 Smith ond Nephew...Mer. 15 Final 1.780 StaetleyMer. 20 Final 4.473 Stone-Platt ...Mer. 22 Final 1.33 Sun Alliance ...Apr. 4 Final 11.505 Taylor

Sun Alliance ...Apr. 4 Final 11.505
Taylor
Woodrow,...Apr. 5 Final 6.485
"Tigor OetsMar. 12 Final 33c
Tillino (T.) ...Mar. 21 Final 3.07
"Transport
IntermedMar. 13 Final 2.351
TricentrolMar. 16 Final 0.837
"Tube Invs. ...Mar. 19 Final 12.421
"Tumer and Nawell...Mor. 12 Final 7.0
"UnilaverMar. 4 Final 27%
Utd. Clacuita...Mar. 13 Final 1.506
Utd. City

Utd. Blacuita...Mar. 13 Final 1.05 Utd. City
Marohants...Mar. 8 Int. 0.45
Ward White ...Mar. 30 Final 2.68
Waterford
Gless...Mar. 19 Final 1.05
Willie Feber ...Mor. 20 Final 6.84
Willie Feber ...Mor. 20 Final 6.84

Willia Feber ...Mor. 22
Woll Elect.
Tools...Mar. 22 Final 0.785

Wolseloy-Hughes...Mer. 15 Int. 3.66

Woolworth (F. W.)...Mar. 12 Final 3.245 Yorkshire Choms....Mar. 22 Final 2.44

* Sound meeting Intimeted. † Rights lasuo since made. † Tex Ires § Scrip haus since made. ¶ Forecast.

Midland Bank 17 E Samuel Montagu 17
L Morgan Grenfell 17
National Westminster 17

Norwich General Trust 17

P. S. Refson & Co. ... 1

Schlesinger Limited ... 1

Trade Dev. Bank 17
Trustee Savings Bank 17
Twentieth Century Bk. 17

United Bank of Kuwait 17

Williams & Givn's 17

BASE LENDING RATES

A.B.N. Bank 17 % Guinness Mahon 17 % Allied Irish Bank 17 % Hambros Bank 17 % Hambros Bank 17 % Henry Ansbacher 17 % Hongkong & Shanghai 17 % AP Bank Ltd. 17 % Industrial Bk, of Scot. 17; % Arbuthnot Latham 17 % Keyser Ullmann 17 %

Transport...Apr. 2 Finel 4,393

Lemps...Mar. 22 Final due

Closures...Mor. 19 Final 2.805

Cotts...Mar. 6 Int. 0,556

*AAHMer. 5 Int. 3.025 APVMer. 29 Final 4.245 *Anglo-Amer. fnv...Mer. 13 Final 520c

Armstrong Equipment ... Mer. 21 Int. 0.88

*Avit end Wiborg...Mer. 7 Final 1.44

BBA Mer. 28 Finel 1.784

BICC Mer. 29 Finel 5.29

BSR Mer. 9 Finel 3.916

BTR Mer. 14 Final 5.5

8tR 8t, of Scotland...Apr. 3 Final 6.083 Final 7.41 8arratt 0evs...Mar. 19 Int. 2.8 Int. 0.77 Int. 1.788

Booker
McConnell...Mer. 29 Fipel 3.952
BowaterApr. 5 Finel 5.771
Bowring
(C. T.)...Mer. 22 Finel 2.348

Brideh Aluminium...Mer. 21 Finel 42.86

8ritish Enkelon...Feb. 28 Finel nil •RPMor. 13 Finel 15.885

*Ductile Steels.....Mer. 11 |mt. 2.110

Expanded Motal...Mar. 19 Finol 2.345

Fairclough
Constr....Mar. 13 Final 2.0
*FisonsMar. 3 Final 8.337
Freemano (Ldn.
8W9)...Apr. 2 Final 1.519

8W8)...Apr. 2 Finel 2.051
GibboneMar. 22 Finel 2.051
GrindlaysMar. 4 Finel 2.051
GKNApr. 5 Finel 10.845
Hall Eng.Mar. 12 Finel 2.471

Harrisons Miyan, Esta...Mar. 19 Int. 1.5

House of Fresor...Mar. 29 Final 3.437

"Alex.) Mar. 27 Final 4.5

"Ibetock Johnsen Mar. 28 Final 4.11015

finvereck Mar. 20 Final 1.417

"Jacoba (John 1.) Mar. 19 Reol 1.35

Johnsen and Firth Brown Mar. 18 Int. 1.3

"Kteinwert Bancon Apr. 2 Final 3.55

Ladbroka Mar. 26 Final 4.017

Latrd Gp. Apr. 3 Final 4.017

Latrd Gp. Final 3.55

Legal and Gan. Apr. 3 Final 0.8

Legal and Gan. Mar. 28 Final 4.194

B Brown Shipley 17 % Caneda Perm't Trust 18 % Cayzer Ltd 17 %

Cedar Holdings 17 %
Clarterhouse Japhet ... 17 %
Choulartons

Tha Cyprus Popular Bk. 17
Duncan Lawrie 17

from 21st January 1980.

RECENT ISSUES

Earl Trust Limited 17 % Blambara el the Accapit First Nat. Fin. Corp. 181% Committed. 7-dey opposits 16%. First Nat. Secs. Ltd. 18 % Cooper Fraser 18 % Cooper Fraser 18 % Cooper Fraser 19 % Cooper 15% Cooper 1

THE DEVELOPMENT BANK

OF SINGAPORE LTD.

61/2 % CONVERTIBLE BONDS 1991

Standard Chartered Bank Limited, Bishopsgate

Branch, acting as London Paying Agents for the above-named issue, will be operating from 4 Crosby Square, London EC3A 6SB with effect

*Howdan (Alex.)...Mar. 27 Final 4.5

Caramic...Mar. 20 Final 2.859

Kent. Apr. 5 Final 1.2

Swedish bank sees difficult year

BY YICTOR KAYFETZ IN STOCKHOLM

THE DIRECTORS of Svenska Handelsbanken (SHB) write in the Swedish bank's annual report that "all indications are that the banking year 1980 wili be considerably worse than the preceding year." SHB recorded a 17 per cent rise in pre-tax profit on banking operations to The monthly averages for these k 2950m (\$229m) iast year. years published earlier were holders funds dropped by 0.2. The Swedish credit market somewhat smaller. Total assets points to 15.4 per cent in 1979. Sk 2950m (\$229m) last year. tightened during the second at the end of 1979 were balf of 1979, with the official dis. SKr 56.3hn (\$13.6bn). count rate moving up 2.5 per cent to 9 per cent and liquidity Enskilda

went up to an all-time high of

10 per cent, and there are signs it may have to follow foreign

DR. ANTON RUPERT'S Rem-

company controlled by Com-pagnie Francaise des Pétroles of France. Total accounts for

about 12 per cent of petroi sales

in South Africa, and the Rem-

stantial stake in the energy

Australian Finance and Securi-

ties (AFS) intensified last week

with a renewed bid from the

The contest started late in

January when Marac announced

deposits year-end and year-end lending stood at mixture of stronger and weaker SKr 31.7bn, or 14 per cent currencies to minimise exchange higher than at the close of 1978. risks.

The rival Skandinaviska Banken (SEB) and cash reserve requirements remained slightly bigger than for banks being raised. In SHB, with year-end deposits up January, the discount rate 8 per cent to SKr 32.5 bn, lend-8 per cent to SKr 32.5 bn, lending more than 18 per cent higher than on the last day of 1978 at SKr 32.9bn, and a closing balance of SKr 63.5bn.

Rembrandt buys stake in Total

brandt Group, whose main issued to its wbolly-owned sub-roughly 20 per cent. Total conliquor, bas bought 20 per cent sidiary Partnership in Industry. trols about 650 filling stations. of Total South Africa, the oil The purchase price bas not been The management is mostly

The South African interest in

Total is now 38.4 per cent, with

Rembrandt accounting for 20 per cent and Volkskas (the

country's third largest bank)

Total is South Africa's fifth

eld. largest oil company, behind guidelines, to build Rembrandt's sbare in Total is Caltex, Mobil, BP and Sbell, each Africa's next oil refinery.

Australian takeover battle intensifies

per cent stake held by Hambro. The Stock Exchange stake

insisted that Marac should make

pectedly announced an offer for

at least 50 per cent acceptance. from the Foreign Investment The existing foreign share- Jackson Graham Moore

disclosed.

another step by Afrikaansoriented business interests,
centred on General Mining
(Genmin), to build up a sub-

THE COMPLICATED battle for Review Board (FIRB)

control of the finance company Australia to buy the

with a renewed bid from the a bid to all AFS holders, or New Zealand group Marac Hold-stand in the market for one

ings. But Hambro Australia, an month, but the FIRB would not

UK and the largest shareholder group increasing its stake.

offshoot of Hambros Bank of the agree to the New Zealand

in the form of 9m new shares of which has a market share of

South African.

The SHB annual report pro- SHB said that 75 per cent of amount had climbed to SKr vides new figures indicating that the increase in its lending 6.9bn, SHB says. were during 1979 was in foreign SKr 30.9bn, up 10 per cent com-pared with 12 months earlier, form of basket loans including a

> The yield on SHB sharebut remained ahead of other Swedish commercial banks. SHB's high-interest "all-in-

one account," which helped to precipitate a new scramble for private deposits by Swedisb banks during the second balf of 1979, bad attracted 100.000 savers by the year-end, and their accounts totalled SKr 4.3hn. A month later, the

Among Rembrandt's other investments is a 25 per cent

stake in Federale Mynbou, a

company which controls General

Mining. Genmin recently en-

larged to almost 50 per cent its stake in Trek, another local oil company, in which Shell and BP

also bave shares. Trek has the

right in terms of government

in boiding in AFS is 58 per cent,

Bank owning 24 per cent.

with the Philadelphia National

ing did not exceed this level.

The employee-owned sharefund, Stiftelsen holding Oktagonen, which was created last March, received an appropriation of SKr 30m, making it one of the bank's largest sbareboiders. The sum of SKr 8m was appropriated to a newly created innovation fund, from which local branch offices will

were recorded as extraordinary As reported sarlier, the board is proposing a dividend of SKr 4.30 per share, up SKr 0.60, for a total payment of Kent. Apr. 5 Final 1.2

*Cadbury
Schweppes... Mar. 13 Finol 2.446
Cape Inds....Apr. 3 Final 5.969
Carton Inds....Mar. 28 Final 3.5
Costes area....Mar. 29 Final 1.731
Colline
(Wm.)....Mar. 15 Final 3.084

*Cons. Gold
Fielde...Mar. 5 Int. 3.611
CorahMar. 2 Final 1.17
Oswnsy Day ...Mar. 21 Int. 0.75

*De Sears
Cons. Minae...Mer. 11 Finol 45c
Ductile SKr 118m.

he able to grant money for the

development of promising in-

ventions. Both appropriations

Kugelfischer in move to diversify

By Kevin Done in Frankfurt

With current order books standing above last year's level, Nearly 80 per cent of Kugel-

by bearings, but the group is now following a strategy to diversify into other fields. The next step in this direction will be taken with the acquisition of Frieseke and Hoepfner, a concern involved in the manufac-ture of radiation measuring instruments, hydraulic tools and

Associates planned that after its bid closed, it would ensure that the eventual foreign boidprecision machinery.
Frieseke and Hoepfner has Marac bas now come up with its alternative: it enlisted the beip in AFS, rebuffed the proposal. Associates Corporation of of "Australian interests" to claiming that it bad no bind. North America, an offshoot of stand in the market for one ing agreement to sell to Marac. Gulf and Western, then unex-month at \$A1 per share for the fully paid shares and 74 cents the entire capital, conditions on for the parity paid, operating at least 50 per cent acceptance, through the Sydney sharebroker

KUGELFTSCHER Schaefer, the largest bearings manufacturer in West Germany. increased its sales world-wide last year by nearly 10 per cent to DM2bn (\$1.1bn) compared with DM1.8bn in 1978.

the company is expecting further growth in volume sales in 1980, although the expansion is unlikely to match the rate of growth achieved in 1979. fischer's sales are accounted for

been in financial difficulties for some years, and since 1973 bas recorded accumulated losses of DM10m. Its lack of financial resources has caused the indefinite postponement of product development and the expansion of manufacturing

CURRENCIES, MONEY AND GOLD

Belgian franc in the doldrums

WHETHER BY design or circum- rates, the Beigian authorities gestions that bave been made stances, the major industrialised bave been caught in a vicious that the franc should be netions of the western world bave once again embarked upon an interest rate war. There bave blems, the franc's performance in discount is decondant on how the rates just in the past two weeks. including the Belglum discount rate, which went to 12 per cent from 102 per cent last Thursday. With major countries motivated, by rising inflation and currency outflows, to increase interest porting the franc. and any sug-

Deulsche Mark moves. High interest rates will not in them-selves stimulate any economic recovery, but for the time being. the Belgians have committed themselves to this way of sup-

	February 29	Fe	bruary 38
	Gold Bullion (fine o	Urreo)	
Glose \$653.548 Opening \$645.548 Morning tizing \$640 Afternoon fixing 5557	(£280) ₄ -283 (£281) ₄ -284 (£280,603) (£280,148)	\$6.9.644 \$6.58.641 \$6.56 \$6.46	:2279*;-252+ ;4272-260*.; ;2278,931; ;2282,429;
	Gold Coins		
Krugerraud	(£281 12.28512) (£278 12.28412) (£279 12.78) (£7812.5112) (£7912.5112)	#643-647 \$640-650 \$165-465 \$162-185 6182-185 \$14919-15212 6790-800 6630-830 \$753-758	(#281-284) (£280-£85) (£71-75) (£71-75) (£781 ₂ -811 ₂) (£781 ₂ -811 ₈)

THE DOLLAR SPOT AND FORWARD

Feb. 29	Day's spread	Close	One month	1	Three months	% p.a.
UKt	2,2685-2,2850	2.2725-2.2735	0.50-0.40c pm			
					1,00-0.90 pr	
fbnaler i	2.0780-2.0850	2.0780-2.0800	0.52-0.42c pm		1.10-1.00 pr	
Саледа	1.1452-1.1475	1.1470-1.1473	0.31-0.27c pm	8.03	0.35-0.B8 pa	n 3.19
Nethind.	1.9470-1.9520	1.9503-1.9518	0.80-0.70c pm	4.61	2.08-1.98 pn	4.16
Belgium	28.75-28.86	28.84-28.86	8-41-c pm	2.18	15-12 pm	1.67
Denmork	5.5110-5.5250	5.5225-5.5250	2.50-3.00ore dis	-5.97	5.50-6.00dis	-4.18
W. Ger.	1.7555-1.7780	1.7760-1.7770	1.29-1.19pf pm	8.38	3.3S-3.25 pr	7.43
Portugal	48.08-43.35	48.25-48.36	8-18c die		25-55 die	-3.31
Sgain	67.04-87.25	67.14-67.19	15-25c dia	-8.58	55-70 dla	-3.73
Izely	818.60-821.50	821.00-821.50	0.90-1.4 (Ire dis	-1.68	5-6 dis	-2.68
Nerway	4.9025-4.9145	4.8100-4.9120	1.20-0.70ore pro	2.32	3.80-3.30 pm	2.89
France	4.1485-4.1810	4.1595-4.1610	1.08-0.98c pm		2.55-2.45 pm	
Sweden	4.2095-4.2190	4.2120-4.2135	0.90-0.70ore pm		2.55-2.35 pm	
Japan	249.75-251.76	251.55-251.65	1.50-1.35y pm		3.90-3.75 pm	
Austria	12,674-12,697	12.690-12.697	8.60-8.00grc pm		24.75-22,750	
Switz.	1.6760-1.7045	1.7015-1.7025	1.91-1.84c pm		4.68-4.60 pm	
t uk	and Ireland a	re quoted in U	LS. currency. Fo	rward	promiums as	nd

discounts opply to the U.S. dollar and not to the individual currency.

1.0680-1.0955 4.02-4.067, 109-20-103.90 152-45-153.10 1.860-1.872 11.17-11.21 4.03¹, 4.04², 109.50-109.70 152.65-152.75 152.65-152.75 1.8891_1.8701_ 11.177-11.191_ 9.471-9.481_ 8.60-9.61 5711-572-28.83-28.68 3.861_3.871_ loc convertible 9.43-9.49 9.56-9.62

EURO-CURRENCY INTEREST RATES The following nominal rates were quoted for London dollar certificates of deposit: one-month 18,00-18,10 per sent; three-months 16,55-16,75 per cent; eix months 16,70-16,80 per cent; one year 16,15-16,25 per cent.

Feb. 29 Butch Guilder U.S.Dollai Swiss Franc 1618-1538 1514-1512 1542-1613 1618-1714 1634-17 18hort term..... 7 days' notice. 8.9 8.9 91:-10 91:106: 10:1-10: 10:2-10:4 1712-181₂ 18-20 131g-131g 1354-141g

Long-torm Eurodollar two years 15½-15½ per cent; three years 15-15½ por cent; lour years 14½-15½ per cent; five years 14½-15 per cent; nominal closing rates.

LONDON MONEY RATES

Feb. 28 1980	Sterling Certificate of deposit	Interbank		Local Auth. negotiable bonds		Company 11 aposits	niscount market deposits	Treasury	Engible Bank Bills &	Fine Trade Bills +
Overnight	18.1-18 18.1-18 181-18 181-18 17:1718 17-1634 183-1812	13-184 	177g-1814 177g-1814 177g-1815 18-1814 175;-18 167g-1714 161g-1714	i !	185 ₈ 185 ₉ 185 ₉ 185 ₉ 18 171 ₂	1712-1754 	Ξ	1549 1642 1618	17 13 18 17 13 18 17 <u>13</u> 17 ₁₈ 17 ₁₈ 17 ₈₈ 161 ₈	18 18 18 18 18 18 18 18 18 18 18 18 18 1

Local authorities and finance houses eaven days' natice, athers seven days fixed. * Long-term local outhority mergage rates nominally three years 164_18½ per cent; four years 1648 per cent; five years 15½-16 per cent. • Bank bill rates in table are buying rates for prime paper. Surving rates for four-month bank bills 17½-17½ per cent; four-month trade bills 17½ per cent. per cent. Approximate selling mans for one-month Treesury bills $150_{34}-157_{32}$ par cent; two-months 157_{34} per cent; three-per cent. Approximate selling rates for one-month bank bills $177_{34}-174$ per cent; two-months $177_{3}-174$ per cent; two-months $177_{3}-174$ per cent; one-month trada bills 187_{34} per cent; two-months 177_{34} per cent and three-months Finance Houses Base Rates (published by the Finance Houses Association) 18 per cent from March 1, 1980. Clearing Bank Deposit Rates for sums at seven days' notice 15 per cent. Clearing Bank Rates for landing 17 per cent. Treasury Sills Average tender mass of discount 16.1235 per cent.

CURRENCY RATES 0.572155 0.62062

hell rang when it bit its warning level, which is three-quarters of its maximum permitted divergence against its ECU central

count rate was partly in anticipa-tion of a further rise in the West So the franc has cost the Cen-tral Bank around BFr 7bn in just one week's support opera-tions, and this level of help obviously cannot be maintained things

indefinitely. Against the European currency

unit, the franc had already been heading for trouble for some time, and on Thursday the alarm

Last week's rise in the dis-

German discount rate (which it did) and also to beip stem the flow of funds out of Belgium and into more attractive currencies So far the flow has not slowed appreciably, and as one Belgian official put it, there are two that would belp the Belgian franc st the moment, a worldwide fall in inflation rates and a decilne in the value of the

OTHER CURRENCIES

7.61.7.71 5.8310.4.9410 2.1700.2.1720; Switzorland, 1.8346.1.8365 9.48-8.58 3.7410.3.7440; Yugoslavia... THE POUND SPOT AND FORWARD

2.2725-2.2735 0.50-0.4c pm 2.6015-2.6025 1.50-1.40c pm 4.472-4.442 32-24c pm 65.50-65.60 12-55-15c pm 12.567-12.57% 22-42cm dis 2.6010-2.6160 4.421-4.451, 65.36-65.76 12.53-12.61

2.37 1.00-0.90 pm 6.69 3.20-3.10 pm 7.09 7-6 pm 8.65 62-52 pm -3.58 64-84 dis--0.11 per-0.10 dis 10.77 97-37 pm -2.19 65-165 dis -1.57 65-165 dis -1.57 65-156 us -1.57 65-156 us -1.57 134-114 pm 5.38 107-39 pm 4.06 94-74 pm 9.18 11.05-10.75p 6.41 72-52 pm 1.67 4.84 5.85 3.48 --2.47 --0.18 9.28 --4.20 --2.75 --0.98 1.50-1.40c pm
3½-2½-c pm
25-15c pm
25-15c pm
27-4½-cre dis
0.04c pm-0.03dis
4½-3½-pm
5c pm-45 dis
5c pm-45 dis
11. lire pm-1 dis
8-0ors pm
42-3½-c pm
42-3½-c pm
18-8grc pm
5½-4½-c pm
Iranca. Finoncis

EQUITIES 50 £1 180 10 **FIXED INTEREST STOCKS**

High | Low S7p | 35-plaurora 5.85% Cum. Pref. |31pm | 100pCiliford(Chas.) 12% Cum. Pref. | 98p | 94 | Felixstowe Dock 94% Cum Red 3612p | 13 pm | 100pClifford(Chas.) 12% Cum. Pref. | 115p | 98p | 94 | Felixstowe Dock \$1% Cum Red Pref. | 94 | 111 | 115 | 111 | 115 | 111 | 115 | 111 | 115 | 111 | 115 | 111 | 115 | 111 | 115 | 111 | 115 | 111 | 115 | 111 | 115 | 111 | 115 | 111 | 115 | 111 | 115 | 111 | 115 | 111 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 115 | 11 ara 29:5

"RIGHTS" OFFERS 10pm 24 35

THE MANCHESTER SHIP CANAL COMPANY Chairman D. K. Redford CBE

1979 RESULTS

		177/2
	1979	1978
	£000	£000
TODE - and a to the second sec	1,782	1,991
azation	700	489
et aside for loan capital redemption	: 89	83
ividends	849	798
eiained	144	630
armings per ordinary share: before tax	43.7p 25.1p	49.2g 36.5p
and seconds at the second	•	

Final ordinary dividend 10.88% (same as last year), making 18.367%. for the year (1978 17.517%), payable April 8 to shareholders registered on March 7. Preference dividend 3.5% already paid.

Acopy of the report and accounts may be obtained from the Secretary of the Company at Ship Canal House, King Street,

Manchester M2 4WX.

U.S. \$300,000,000 of which U.S. \$120,000,000 has been issued in the initial and subsequent Transfer

Citicorp Overseas Finance **Corporation Limited**

(incorporated with limited liability in the British Virgin Islands)

Guaranteed Floating Rate Notes Due 1984 Unconditionally guaranteed by

OCITICORP

In accordance with the terms and conditions of the abovementioned Notes and the Agent Bank Agreement dated as of November 28, 1979, between Citicorp Overseas Finance Corporation Limited and Citibenk, N.A., notice is hereby given that the Rate of Interest for the initial one month sub-period has been fixed at 1618% per annum and that the interest payable for the initial one month sub-period in respect of U.S. \$10,000 nominal of the Notes will be U.S. \$145.85. This amount will accrue towards the interest payment due May 29, 1980.

March 3, 1980 By: Citibank, N.A., London, Agent Bank CITIBANCO

LG. Index Limited 01-351 3466 Lemont Road, London SW10 9HS.

1. Tax-free trading on commodity futures.

2. The commodity futures market for the small investor.

CORAL INDEX: Close 466-471 (unchanged)

UNIT TRUST SERVICE

OFFSHORE & OVERSEAS—contd.

Pacific Basin Front

Providence Capital Life Ass. IC.I.)
PO Box 121, St Peter Port, Giermey 0481 28
Sterling Bond Fd. 42.8 45.0 59.8 Intell Bond Fd. 42.8 45.0 101.0 Intell Bond Fd. 42.8 45.0 101.0 Prices at Feb. 27. Next dealing March 2 Prices at Feb. 27. Next pressing marco 2.

Quest Fund Mingumt. (Jersey) Ltd.
PO Box 194, St. Helier, Jersey. 0534-27441
Quest Stig. Far.Int. 78.1 22.24 15.11
Quest Intl. Secs. 51.01.2 10954 11.15
Quest Intl. Secs. 51.02 10954 11.15
Prices on Feb. 27. Next dealing Nar. 5.

Rothschild Asset Management (C.I.)

P.O. Box 58, St. Julians Ct. Guerrisey, O481 26

G.C. America Fd.† 10531 21 1.72m 8

O.C. Commodity 204.0 216.2 16.4 5

O.C. Div. Constaty 1 10552 81 56.00 0

O.E. Home Kg. Fd.† 1 11575 40.5 16.0 5

Prices on Fd. 27 Next dealing March 7. 17/rices on Fd. 27 Next dealing March 7. 17/rices on Fd. 27 Next dealing March 7. 17/rices on Fd. 27 Next dealing March 7.

Rothschild Asset Mgt. | Bermade) P.O. Box 664, St. of Bermade Md., Bermade Reserve Assets- Fol (USS) 83 9,84 | 0.4] -Prices on Feb. 25. Next dealing March 5. Royal Trust (C.I.) Fd. Mgt. Ltd. P.O. Box 194, Royal Ts. Hsa., Jersey. 0534 2744) Save & Presper International Dealing to P.O. Box 73, St. Heller, Jersey

6.18

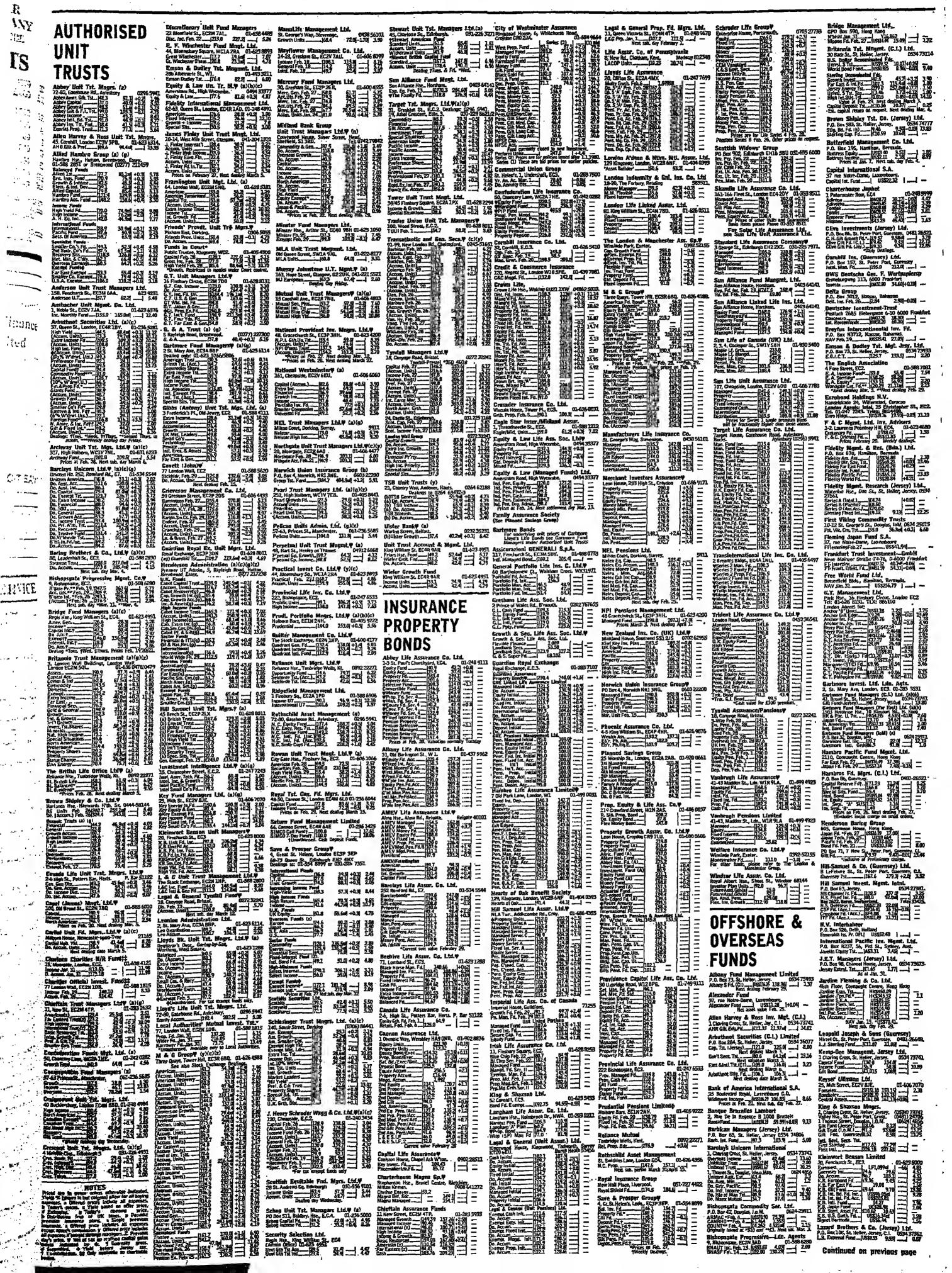
Singer & Friedlander Ltm. Agents. 20, Canon St., EC4. 03,-248 9546 Detafonds. 0422-58 23.771+0.071 6.73 Tokyo Trusk Feb. 1 USSU175 23.071 Standard Chartered Intl. Bd. Fd. TS8 Gift Fund Managers (C.L. Ltd. Toloyo Pacific Holdings N.V. Intimis Management Co. N.V., Curacat. NAV per share Feb. 25 USS72.35 Telcyo Pacific Hidgs. ISeaboard) N., Intimis Management Co. N.V., Curacao. NAV per share Feb. 25 USSS2.J1.,

07-600 4555 |-0.05| --

World Wide Growth Managements

10a, Boulegard Royal, Luxembourg Worldwide Gth Fd US\$27.40 [40.46] Wren Commodity Trust

UNIT TRUST INFORMATION SERVICE



ABMTM Group of Companies

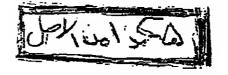
Machine Tools Marine

			□ Pro	ects													
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		S	erving the World of	industry and	Comm	erce.		Due	Stock Antofagasta R LJ Do. Spc Pref	ly #	_ : -	ıi _	Y≆		Mar.	Paid An	aliè
•			BRITIS	- FUN	DS			I.la	UChilean Mived Chinese (1-pc) Do. 5pc 1912 Do. 5pc 1913	898	57 671 50 10.11 54 -11 52 -12	-	3	39	Nov. April Dec.	Úc Ju	ijΗ
	Inter Du	2	Stock	Price £	뮯	let,	ield Red.	IIIM T	Di German Yng, 4 N Greet, 7pc Ass	pc 4	13. — 18. —	9 H 4	10		Dec. Sept. June Jan.	701	r H v.J. neJk
38 14	N 1	SMa 3Ma 4Ma 15h	Oris ⁹⁹ (Lives Treasury 9pc 1980 Treasury 91 ₂ pc 180 Treasury 31 ₂ pc 77-4	up to 1	AL 2831.	964 362	- 1	1A 1 May 1 20J 31 10J2 10	O Do 4pc Mised A Hung, '24 Ass Diceland 6/apc, '82 U Ireland 7/apc, '83 U O 9/apc, '91	188 188	22 1727	II -	ᅺᇼ	28 33 00	Feb. June May Aug.	Ap Sep	ě (N
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23	F 2 Way May Jul	17) 17) 23) 15)	gEzch. 942pc 1991 gExch. 942pc 1991 gExch. 3pc 1931 Treas. Vanable '816 VExch. 124pc 1981 a Treas. 842pc '80-80-	- 88 € 97 # 955	1979	3.40 17.08 13.33 9.52	12.16 18.60 15.63 15.25	!		ERIC	16ml 12	4 31/2	3.	20	June Jan. May		ly Ri
货	5 1	6Ma	Treasury 14pc '82	# 894 254 984 941	91	3.50 14.28 17.49	11 47 15 20 19 41	Oividends Paid	Stock	ERIC		Div. Bross	Cm	SA.2 A.M	Nov. Apr.	ember Jun Au	e S
51 21	Mar uf Aug_	27.	7 reasily 81 apc 82 82 83 84 84 85 8	\$6,	1 324	10.16 3 85	1489	M.J.S.D. F.My. Ag. N.	AMF 5% Conv. Abbott Labs.II	87.	22 8. 30 17. 324 15.	ZI 551.00	H=	62 28	Sept.		ען עלום
	S 1 N 2 Ja May	7 Maj 4 Maj 18 July 22 M	r Treasury 12pc 1983; y Treas. Variable 83; I Treasury 94pc 83 Erch. 134pc 83•	921 91 85, 95 # 77	1310		26 25 14.97	F.My.AL.N	American Expre American Medical Asarco Inc	Z	3 m 15 3 m 6 12 4 31 1 16 5 28 1 3 m 7	2 \$2.40 2 \$1.80 2 \$1.50 1 60c	1 —	4.5 6.2 2.9 10	Nov.	Marc	ijΫ
12 15 20				# 77. # 88. 95.	511 14.1	11.73 7.07	15.25 15.25 12.97 15.37 15.58	Mr.Ju. 5. 1	Baker Inini. Corp. Barnes Grp. Sé Bendix Corp. S Belh. Steel \$8		Fact 30. Dent 28. 214: 31.	4 34.04	[=	10 4.7 6.0 7.4	Fets.	Ang Nay Jan	g. (C. C. r. (L)
22 19 26 22	N 2 D] Mar Aug	93.5	Funding 51-pc 32-8- Exch. 11 apc 1984 Exche 98: 14-pc 1984 Ench. 3pc 1984 Treasury 17-pc 198- Treasury 15-pc 198-	891 ₄ 0	142	4 29 13 46 15 13	15.24 15.24 15.24	1 32 AD 39.0.	Brown g Fer. c.	62). 7	03p 201 Rosa 191	2 70c 2 90c	lΞ	4.5 6.9 3.6	Dec. Oct.	Jur Januar Ma Sep	e Li
22 10	May	221	Five to Fi 1985 april 1985	rteen Y	ears			J.Ap.ly.0. F.My.Au N. F.My.AuN.	Chase M min.\$1	25 25	17, 27.1 1, 10 25 275, 27.1 1, 10 16 1, 10 29 50 16 27	\$2.80 \$3.0 \$2.10 \$2.80		6.2 0.0 4.1 8.1	Mar. Apr.	_ `	L W
IN A	Juli j	ма 261	Treasury 8: sp: '84-8c; Even: 13-apc 1987 Funding 6-apc '85-85 Treasury 7-apc '85-88 [Transport 3pc '78-6	五 分	25.0	14 22 9 16 10 69	14.85 12.81 13.51 11.49	Mr.Je.S.O. Mr.Jr.S.O. Mv.Au.N.F.	Chrysler So ₄	l 37	50m 27. 79p 18 79p 34/1 4p 26.1	\$210 1 52.10 1 51.28 2 51.20 2 51.20		6.0 6.7 7.6	B	EE!	RS
22 15 15	Agg.,	22	Treasury 117 pc 198	9. 81 ² 61 93,	16.1 10.9 10.12	13.68 8.46 14.18	14.75 12.39 14.60	MyAuN.F. F.My.At.N. Ma.tu.Se.De	Do. Cm. Prf. 8 Colgate-P. \$1. Colt Inds. \$1		6 1	ij	=	밝	Sept. Feb Jan.	Ma a. Sep	r. Ai
15 10 50 25	D 1 Jui 다.	5.km 10.1 5.Ap. 50c	Treasury 13pc 1990: Treasury 13pc 1990: Treasury 113pc 199 Funding 53pc 197-91 Each, 11pc 1991 Treasury 123pc 1921	# 72 # 855	811 412 189 1712	14.06 9.82	13.72 14.74 12.87 14.75	Mr. Je. 5. 0 My.A.N.Fl. Ap.Jy.O.ia. F.M.A.N.	Cont. Illinois \$ Crown Zell. \$5 Eaton Crp. \$0.	_1 2	1012 7 1 1012 7 1 2012 5 1 12m 57	51.90 51.60 52.19 52.19	ΙΞ	36 71 47 74	Dec. May Jan.	Dec	BE BOOK
27.55	ī. 2	АUG	Exch. 1214pc 92	86	盥	占쓞	14 75 14 42 14.78	J.A.J 0, Mr.Ju,S.O. J.Ap.Jy.O.	Erron	- 1	414 131 2834 31 3p 31 1	51.90 51.60 51.72 51.84 51.84 51.84 50.80	Ε	5.8 7.5 7.4	Alig. Jac. Feb.	Jul Aus	ly B
	Mar. Viey	155	Finding 6pc 1973; Finding 6pc 1973; Tressury 13 apc 199 Tressury 14 apc 94; Exch. 121 pc 1994. Treasury 12pc 94; Treasury 12pc 95.	551,40 97	1,72) 1,720	10 77 14.75 14 86	14.75 13.06 14.90 14.92	J. Ap. Jy. (Mr.Je.S.O. Mr.Jn.S.D.	First Chicage Fluor Corp. \$5 Ford Motor \$2 GATX	- 15	30 31 15 15 15 15 15 15 15 15 15 15 15 15 15	51.20	Έ	21 134 64	Fb.My Apr. Feb.	rgust "Aug. N Oc Oc	VICI LICI
221 171 25.	May May	Alig 17N 25Ja	Exch. 12120c 1994. Treasury 90c '94±± Treasury 120c '95	975 xx 863 721 847	Hilli	14.46 12.88 14.34	14.80 13.83 14.73	Apr. 0c Mr.Ju.S.0, Mr.Ju.S.0	Gen. Elect\$21 Giffette \$1 Honewach 51	2 — 9 50. 39	21 2	1 52 80 1 51 77 3 52 60	ΙΞ	5839 2235 562	Aug. Aug.	Fet Fet	. G
1N 22,	. 1 la 2	May	Gas 3pc '90/95 Exch. 100 pc 1995	een vez	25.9		14.44	Mr.Je.Sep.Do Mr.Ju.S.O. Mr.Je.S.O.	Hutton E.F I.B M. Corp. \$1. Ingersolf-R \$2 II. U. Internation	SHI'I 970	יאו ומאמו	13,32	!=	7.0	Aug. Jan. May Aug.	Jul Oc	y Hi
1555	: 13	Mar	Treasury 123apc '95t Treas 14pc '96t520pd) Treasury 9pc '92/'96t Treasury 151apc '96t	19\	721	4.67 3.05	14.72 14.74 13.89 15.01	F, MyAuN, Ma.Ju.S.O, ApJuQJa	Louiser Al. \$13. Louisana Land \$0. Mart. Han. US\$7	15 2 50 3	0x1 52 23 2611 23 311		=	5.4 3.6 8.9 6.0	April Feb. June	No.	L AL
썴	ul :	10ct 22.ja	Treasury 1514pc '965 Exchemier 1314pc '965 Redemption 3pc 1966- Treasury 1314pc '971	6 4234td	器	4.61 6.97 4.61	14.76 10.20 14.75	N. F. My. Au M. Jr. S.O. Ju. Oc. J.A.	Norten Simon Inc. 1 Owens-III, \$3.1 Quairer Qats US	25 1 25 1	30 29.1 2m 19.1 2% 18.12	\$1.04 \$1.40 \$1.40	ĮΞ	7.9 5.2 4.9	Mary Oct. July Jan.	Apr Fet	1 Sc 7 C 1 V 2 W
NAME OF THE PARTY	ar	18	Exchemer 101-pc 19 Treasury 84-pc 1997: Treasury 64-pc 95-98; Treas. 151-pc 98#	55%	걸래	3.91 3.11 2.14 4.99	14 40 13.84 13.27 14 96	March J.A.J.O. F.MyAuN.	Reliance \$0,25 Rep. N.Y. Corp. Rexnord \$5	SS 28	400 7.2 214 10.12 40 9.11	550 5104	ļΞ	3.2 5.4 5.7	Jan. Dec.	700	e W J. Yo
20M 15J 26S	ul :	ZUN 15Ja 1837	Exch. 12pc 1998 Treasury 9 ¹ 2pc 1999:	773	10121 1821	4.40 3.47 4.42	14.60 13.95 14.63	S.O.Mr.Ju, S. Dec. Nov Mr.Ju.S.O, Mr.Je.S.D.	Richdso, MrriLS Rockwell Int Saul 18, F.1 \$1 Shell 0ii \$1	二 3	86 1174	\$2.60 \$2.40		50 50 35			зU
19% 22% 22% 22%	22	May May	Treasury 101 ₂ pc 1995 Treas. 14pc '98-01 Exch. 12pc '99-02.	975 975 842	1510	3.98 4.76 4.43 4.47	14.32 14.79 14.56 14.70	Mr Je.S.O. Au N.F.My, Ma.Ju.Se.Dec	Singer (\$10) Sperry Corp. \$0. TRW (nc. \$14.	50. 374 19	21.2 35. 31. 37. 52	40c	Ξ	4.8 2.9 4.6	June	-	[] L[Ab
25) 199 14)	19 2 19	SJa Mar Ja	Treas, 133 pt 2000-03 Treasury 111-pc '01-0 Funding 31-pc '99-0 Treasury 121-pc '03-0	A 801gml	핊	4.72 4.26 0.13	14.74 14.40 11.63	June Dec	Tenneco Do 10% Lo Sir 91- Tesoro P. USSO 16 Texaco So. 25	5 14		20°€ 30c		59 F72 120 60	Jan. Feb. Feb.	Jul Oct	AI AI AI
5A0	May	50cz	Treasury 8pc '02-06\$	640	123d i	9.47	1452 1453 1339 1436	Mr.Ju.S.O. Ja.Ap.Ju.O.	Time Inc. Transamerica \$ Utd. 7ech. \$US U S. Steel \$1	1 21	26.2 20 19 10	513		73	Feb. Feb May	CLISTY .	Ba Ba
22) 10M 26J 12J	lat.	10SI	Treasury 11 apc 03-0 Treasury 51-pc 08-12: Treasury 73.pc 12-15: Exch. 12pc 13-17	435,00	39 1 1712 1 42 1 2012 1 511 1	257	12.86 13.27 13.94	Mr.Je.S.D.	U S. Sieel \$1 Woolworths \$3 Xeror Corp. \$1 Zapata Corp. 2	2. 96	182 60 30.4 70 10.10 63 4.12 24 15.1	\$1.60 \$2.80	Ξ	8.5 7.4 4.8	May Feb. Ang.	Dec Aug	: Ba : Ge : Be
1F.	v	Attg.	Und Consols 4pc	ated 29%	127.1211		=	·		IADIA		, 10.	1-1		May Mar. Mar. Aug.	Allg	Be Be Be
JAP SAP SJ	a.A.J	0α 0.	War Loan 31-pc++ Conv. 31-pc '61 Art. Treasury 3pc 66 Aft Consols 21-pc	333 di 23 di 205 t	25 2 1 3 0 1 3 12 1	9.55 2.35	=	Ma.S.J.O. F.My.Au.N. A.Jy.O.Ja.	Bk, Montreal St Bk, Nova Scot, Bell Canada \$8	945	ote 30.1 Op 28.12	951.48 51.40 51.64	=	5.9 5.6 8.3	Oct. Oct.	Ma Maj	y Bl y Br Br
2Ар		IN	TERNATIO	NAL	BAN	lΚ		May Nov. Oct. F.MyAuN.	Bow Valley Brastan Can.lmp.Bk. 52	1 94	35 10 12 0% 21 12	110c 151.20 51.80 51.80		0/2 4.2 7.3 3.8	May Jan. Dec. Aug.	Ma	y Br
15F		C	5pc Stock 777-82 ORPORATI	ON LO		S.		July Jan. July Jan. J.Ap.Jy.Q.	Can. Pacific \$5. Do. 4pc Deb. £1 Culf Oil Can.II	00 2	% 19.17	\$1 50	=	14.1 0.9	Oct. Jan. Nov.	Apr July July	y C.
304 14 14		ĩñ	8ath 11½pc 1985 — Birm'ham 12½pc 198 Bristol 15¾pc 1981 Burntey 13pc 1987	0.3		4 56	15.23 15.44 16.78 15.32	Ap.Jy.O.Ja, F.MyAuM, Apr. Oct. Jan, July	Hawker Sid, Can Hollinger \$5 Hudson's Bay [j Hud.B.Oil G. \$2	1	ス は は に に に に に に に に に に に に に に に に に	s\$2,20	Ξ	45 47 37 15	Jan. June May	Jun	. Ca
31M 120 105 105 105	ľ	240 25N 10A	Cardiff I 1pc 1986 G.L.C. 121-pc 1983 Do. 121-pc 1983 Glasgow 91 ₄ pc 20-82	931 ₂ 911 ₂	24.9 1 25.10 1 10.1 1	3.02 3.37 3.66	14.77 16.03 15.78	Mr.Je.S.D. Jan.Ag.J.O. F.My.Au.N.	Imperial Oill Inco Inf. Nat. Gas 51	- 2 54	11, 28.2 37, 8.2 5p 30.30	\$1.40 60: 90c	l=l	1.7 0.2	May		3333
150	8 .	JA	Firetbook 3,46c ,20-9	. 503	19 <u>19</u> 15197	1.99	选择		Massey Ferg. . Place Gas 51 Rio Algori Royal Bk.Can. 1	_ 15	0p	51.50 52.40	Ξ	43	Sept. Oct. May	Apri Apri Oct	.Co
		Ю	Lon. Corp. 134pc '8 Do. 94pc '84-85 L.C.C. 51-pc '82-84	3 93 841 ₂	312 1510 1 39 1 1712 7	1.46	15.77 14.35 14.48	SeDeMrJu F. MyAuN,	Seagram Co. C: Tor. Dom. Bk. S Trans Can. Pipe	20	78.7 0% 27.12	\$1.36 \$1.36 \$1.36	=	413 24 45 45 45 45	April April Nov. Dec.	Oct. Mag June	O V
100	4 1.1.5.	3055	Do 512pc 85-87 Do 64apc 88-90 Do. 3pc 20 Aft. Newcastle 94apc 78-1	631 ₂ 631 ₂ 211 ₄ 80 961 ₉ m		9.78 4.01	13.36 13.56 16.81	BANK	S AND	HIRE	PU				Jan. Jan, Nov.	July July May	Fe
15J C(M	וטכג	Sunderland 121 apr 198 NWEALTH	& AFRI	CAN	188.E LO.	15.79	Sividents Paid Jan. July	Stock	Price	zei Nei 14/1 022			PÆ 55	Jan. Aor.		Fir Fra Ga
A 남		1017	Aust. 51-pc '81-82 . Do. 6pc 1°81-83 N.Z. 7'4pc 1988-92 Do. 71-pc 83-86	- 77	3121	2.26	15.44 14.65 14.42	Feb. Aug. Feb. Aug. Oct. Apr.	Alexanders 0. £1 Algemene F1.100 Allen Harvey £1	310	281 16.0 14.8 (025 24.9 21.5	% <u>21</u>	11.7 9.0 10.3	53	Joly July	Feb Oct	Gre Gle Gle
战战	a	TNI	Str. Africa 91-pc: 79-81 Str. Rhod. 27-pc: 65- Do. 6pc: 78-81	1 92	27.9 1 366 1265	628	14 <i>2</i> 7	Dec. June	Allieo Frish Ansbacher (H.15p Arbuthpot L. £1 8k., treland £1.	2224	511 508 876 911 +10.4 911 025	42 =	9.3 7.1	Ξ	Feb. Mar. Jao.	Aug Sept Juh	(H.) He
			LO/ Public Boa	INS				Mar. Sept. May Nov. Aug. Feb.	Do. 10pc Conv. Bk. Leumi SO. 1 Bk.Leumi (1)()£1	105	28.8 Q10 8.10 Q16 30.7 8.57	2	6.7 22 123	Ξ	Jan. Jan. Dec.	July June Aug June	He
112 301 301 301 301 301		31D 15	Agric. Mt. 5pc '59-8 Alcan 101 ₂ pc '89-94 Met. Wtr. 3pc 'B'	91 58	31218	1.74 5.97 1.75	끊 뱒쁡	Jan. July Nov. May A. J. O. Ja Apr. Oct.	8k. N S W. SA1 Bank Scotland S Banker; N.Y.\$10 Barclays E1	157 278 £185 445	812 018 249+12 812053 23.8 676	25 5.0 30 - 5 6.2		5.7 4.2 3.8	Jan. April Mar. April	Sept. Oct	JI.D
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FINANCIALTIMES

Monday March 3 1980



FT SURVEY OF BUSINESS OPINION AND CBI TRENDS

Steel strike hits confidence

BY PETER RIDDELL AND DAVID MARSH

THE TWO-MONTH-OLD steel strike bas so far had little effect on the level of production in the rest of British industry. The main impact so far has been to undermine an already very low This is indicated by the Con-

federation of British Industry's latest economic situation report and monthly inquiry and the Financial Times survey of business opinion, both of which are published today.

The CBI has been telephoning round big companies each week in the latest inquiry. A few more companies are being affected in some way, but the estimated drop in manufacturing output, excluding British Steel, is still less than 5 per cent relative to planned levels. The FT survey shows that although some engineering companies are sufferiog from a products and lower output ex-shortage of steel or components, pectations." The inquiry was shortage of steel or components. others bave not yet been

The CBI suggests that this

EARNINGS ON CAPITAL	A	•					
	4 :	4 monthly moving total			February 1980		
Those expecting earnings during the current year to:—	Nov Feb. %	Oct jan.	Sept- Dec.	Aug Nov.	Eng'g. (non- elect.)	Chems. & Oils	Ship. Tsport.
Improve	40	40	37	42	36	37	63
Remain the same	25	28	35	35	13	20	6
Contract	32	27	23	19	50	40	31
No comment	7				7	2	

the begioning of January at a time when demand and output were sluggish and when industry was becoming increasingly overstocked with finished goods.

Looking at the overall pros-pects, the latest CBI trends inquiry points to "some weakening in orders for manufactured carried out between February 5

The downturn in activity so

"can be attributed largely to far appears to be gradual carried out at the end of the high level of steel stocks at rather than drematic with pro- January and in the first fortducers of intermediate goods eight of lest month, shows that facing weaker demand than the the level of optimism about the capital and consumer goods general business situation is at

> Both surveys indicate that in spite of the steel strike, industry has not yet been able of reduce excessive levels of stocks. A high proportion of companies are reporting more than adequate or high level ol stocks of frished speeds. Snished goods.

The FT survey, which was

the lowest level for three and a balf years.

Apart from a dectine in new general concern about the pros-

TUC will seek changes in policy

By Hazel Duffy and Alan Pike

THE TUC will use Wednesday's meeting of the National Economic Development Council to confront the Government with demands for radical changes in its economic policy. TUC leaders will present their 1980 economic review—an annual exercise which the TUC says has never hefore had to deal with "such a poor set of economic prospects "-- at the

meeting.
During the life of the Labour Government, the economic review provided the basis for pre-Budget discussions between union leaders and the Chancellor. But with the change of Government, the TUC decided that the NEDC meeting was the hest available platform from

which to launch its ideas. The TUC is demanding an expansioary Budget, with selective, temporary import controls; and end to cuts in public services; and early increases in pensions and child henefits.

A paper from the Nation Economic Development Office to he submitted to the council will provide an opportunity for discussion on the main issues of contention surrounding the

Government's economic policy. They are expected to include international competitiveness and North Sea oil; the effect of the recession on investment and productivity; and the effect of monetary policy on inflation.

UK TODAY MOSTLY DRY and rather cold, Scotland and Northern Ireland. London, Cent. S. England.

Midlands, N. and N.W. England Mostly dry. Frost et first. Rather cold. Max. 7C (45F). S.E., E. and N.E. England Wintry showers at first. Sunny

periods. Max. 6C (43F).
S.W. England, Wales,
Channel Islands, Isle of Man
Mainly dry, with sunny
perions. Rather cold. Max. 8C

S. Scotland, Cent. Highlands. N.W. Scotland, N. Ireland Mainly dry after early frost

Max. 8C (46F). N.E. Scotland, Orkney, Shetland

Mostly cloudy, rain in places. | Labour-saving.

Max. 6C (43F).	• The growing number of	cial plan will cut inflation.			
OUTLOOK: Mostly dry	women working outside the	thinks the rate will not be back in single figures for at least			
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Rmohm F 8 45 Milan C 8 46	A TEAM of senior British	stantially more than the £350m offered to Mrs. Margaret			
Slackpl. C 7 Mntreel C-20 -3 Slackpl. C 7 45 Moscow F -3 27	officials, led by Sir Michael Palliser, Permanent Under	Thatcher, the British Prime			
Boids. C 5 41 Munich F 7 45	Secretary at the Foreign Office,	Minister, in Dublin.			
Suistel C 7 45 Naples C 14 57	will visit Brussels this week to	But Britain faces an uphill			
aruesols F 6 43 Nwcstl. R 4 39	discuss ways of spending more	struggle if progress is to he			
a. Aires S 33 91 Nice C 13 55	EEC money in Britain. Their talks will focus on a	made at this month's summit.			
Cairo 5 14 Sa Nicosia E. 19 Ed	detailed programme of energy,	Last week brought indications			
Cape T. S 24 75 Dalo S 0 32	transport and infrastructure pro-	not only that the budget prob-			
Cologne S 2 37 Perth S 36 95	jects in depressed regions. The	lem is likely to be bigger than foreseen—the latest Commis-			
Corfu S 15 59 Prague F S 41	EEC Commission, in collabora-	sion estimates suggest the net			
Oborak S 13 61 Rhodes S 10 50	tion with UK officials, has been drawing up the programme	UK contribution to this year's			
Ednbgh. F 6 43 Rio Jo 5 36 35	since the EEC summit in	Budget will exceed substantially			
Florence C 13 55 Salzbg. S 10 50	Dublin last December.	the forecast £1.2bn—but also that Britain's relations with its			
Frankri. C 17 ESIStekhm. S 0 32	The programme, which would	EEC partners are under strain.			
Genova S 8 45 Strasby. F 3 44	be financed through a special chapter in the Community	President Valery Giscard			
Glasgow C 7 45 Tehran C 4 40	Budget, will be put before the	d'Estaing said on French tele-			
Malainti Sp = 2 28 Tenentle S 12 54	EEC summit meeting in	vision last week that Britain			
H. Kong C 15 59 Tokyo S 9 49	Brussels in four weeks. Com-	need expect no Budget conces- sions until it was prepared to			
Innabre. C 8 48 Tunis S 17 63	mission and British officials hope it will prove an acceptable	give ground to France on farm			
Istanbul S 3 37 Valencia F 16 61	means of cutting Britain's net	spending, lamb trade and fishing			
Je burg C 24 75 Vianna S 9 48	contribution to the EEC Budget.	rights.			
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C—Cloudy F—Fair. Fg—Fog. R—Rain. S—Sunry. SI—Siect. Sn—Snew.	government heads will be pre-	of West Germany, whose sup-			
Th-Thunderslorm.	pared to allow Britain sub-	port is essential to Britain, is			

Hunt continues for new shipbuilding chairman

BY JOHN ELLIOTT, INDUSTRIAL EDITOR

THE GOVERNMENT is extending the contract of Admiral Sir Anthony Griffin as chairman of British Shipbuilders for three months in the hope of 6ndlng a permanent successor during that time. Two main candidates are

being considered after a hunt lasting nearly a year.

The Department of Industry's simultaneous search for a successor to Sir Charles Villers as chairman of British Steel has helped to illustrate the problem Ministers have in filling the top Jobs of nationalised industries.
No firm candidate has been

chosen to succeed Sir Charles, who is due to retire in Sept-emher, A large number of top industrialists have been approached for ideas, both hy the Government and hy Russell Reynolds, a firm of head-hunting consultants hired hy the Industry Department.

If one of the men now

hullders chalrmanship accepts the £44,000-a-year post, Sir Anthony's contract would end

Continued from Page 1

Chemicals

cheaper.

materials because they were



Mr. Casey: fntnre unclear

being considered for the ship in June. He was to have Until Sir Anthony's successor

is chosen, the future of Mr. Michael Casey, the chief executive and one of twn deputy chairmen, will not be clear. Mr. Casey is a former Industry Department civil servant and his contract expires in May.

There is a chance that the new chairman might want to he chief executive as well—as happens in some nationalised industries. Sir Anthony has heen a full-time but nonexecutive chairman, dealing mainly with the corporation's warship huilding and external relationships.

Mr. Ken Griffin, a former official of the Electrical and Plumbing Trades Union, Is expected to he reappointed in the next couple of weeks as the other deputy chairman.

Other hoard members, including twn trade union leaders— Mr. John Chalmers of the Boilermakers and Mr. Ken retired, at his own wish, on Baker of the General and March 21.

March 21. expected to he reappointed.

Japanese 'chips' catch U.S. off guard

American companies, almost all of which are work-ing on 256-K RAMs of their own, believe these will be produce. For this reason they are cautions about forecast-

While most U.S. manufac-turers doubt that the Japanese have a lead in the race, they are surprised that they should have apparently caught up so rapidly.

Starting virtually from nowhere in the mid-1970s, the

Japanese industry has already captured a substantial share of the U.S. and European semi-conductor markets and is prodocing 16-k RAMs, the industry's "standard," in

quantity.

A chill wind from

BY GUY DE JONQUIERES

JAPAN'S semi-conductor Industry has canght its U.S. competitors off guard by announcing that it has developed prototype elec-tronic memories capable of storing four times more information than the most advanced components now available.

Known as 256-K Random Access Memories (RAMs), they are designed to store 262,144 bluary units (bits)—the ones and zeroes which make np a computer's operating language—on a wafer measuring as little as six

millimetres square.

RAMs are used to store operating instructions and other pieces of information needed to operate a com-puter's central processor. Both NEC-Toshiba and NTT have disclosed that they are working on 256-K versions.

The largest RAM at present on the market, the 64-K, can store just over 65,000 hits. But technical difficulties stemming from the high degree of miniaturisation involved have so far prevented any manufacturer from producing the component in satisfactory quantities. American companies,

even more difficult to mass ing when they will be on the market.

The quality of Japaense products and the aggressive-ness with which they are heing marketed has severely shaken the self-confidence of the U.S. industry and has led to demands for additional support from Washington.

The dramstic impact of the North Sea build-up on the UK non-oil company sector is daily hecoming more spparent. Last year the value of North Ses production probably almost doubled to a little over £5bn and in 1980 it could well double again. The effect on the balance of payments and the exchange rate is leading to a profits collapse in the manufacturing sector, and the company sector's financial deficit is shooting up. At the clearing banks, for instance, there is concern at the rapidly rising recourse to overdraft facilities by corporate customers, at a

time when the clearers are

already deep into the "corset"

penalty zones.

fresh instances.

Grim for industry

forecast stands out above all

the others: the indication by

the London Business School

that non-North Sea profits, net of stock appreciation, will drop

Profits were, of course, stready becoming sluggish in

1979, with an estimated 6 per cent drop according to the esti-mate of the LBS. The impact

on conventionally reported com-

£3.1bn to £6.6hn in 1979, and

likely to stay at around that

level this year. Another of the

hatch of forecasting bodies, the

CBI in its economic situation

report, calculates that the pre-

non-North Sea industrial and

commercial companies last year was about 3 per cent. Its fore-

cast that the return will drop to

a worst ever 2 per cent in 1980

makes it look optimistic by the

The CBI economists have cal-

culated that UK competitiveness

standards of the LBS.

hy 60 per cent in 1980.

THE LEX COLUMN

the North Sea

quarter of 1979, albeit that unit labour costs in UK manufactur-So Vickers, for example, is ing were more than 30 per cent selling off its reprographics bigher relative to main overseas business to the French, competitors than the average although not long ago it level of 1975. Recently wages regarded office equipment as a and sterling bave resumed their growth area, while Laird Group is sbutting down Patent Shaft Steel, which is rendered both

lessly uncompetitive against tiveness since 1975 of 40 per imports despite extensive reequipment Carrington Viyella In 1980, according to the LBS, wage costs per unit of output (excluding oil) will rise by 18: per cent. By all normal reckon-ing sterling should weaken to has chopped its dividend, is steedily closing down sub-sidiaries as they run into trouble, and is grimly hoping offset at least part of this. But tn staunch the cash outflow. so it should have done last year, and perversely it strengthened. With so many OPEC surplus billions roaming the world, Each day's newspaper brings The grim hackground for thing by a logical science. industry is minutely examined today in a whole pile of economic forecasts. For the company sector one statistical

All the forecasters are expecting a large rise in the financial deficit of the non-oil company sector. Exactly how large depends of course, on the extent to which individual companies take avoiding action. In the fourth quarter of 1979, for instance, manufacturers' stocks fell slightly in volume terms (though the book value, thanks to price inflation, still rose some £1.4bn). It was retailers which piled up stocks, presumably because of the poor Christmas selling season.

Over-stocked

pany results will be masked by the rise in stock appreciation, estimated to have jumped from In the New Year It had been expected that the rundown of steel stockpiles, after the onset of the British' Steel strike, would add to the destocking trend. However, the CBI monthly trends survey for Fehruary suggests there has tax real rate of return (at replacement cost) achieved by been no real change in manufacturers' stocks since

December. It could be that an
nverstocked distribution system

Which is not to say that the
banks, for example, can be
oblivious to the plight of some is temporarily blocking the of their customers; or that there attempts of manufacturers to are not undiscounted shocks to cut back their working capital. come in the vulnerable areas,
That would be normal enough lowly valued though these stabilised hriefly in the fourth at this stage of the cycle.

And the National Institute, its Economic Review appears be expecting a stabilisation stocks rather than the destoc ing anticipated by the LBS of indeed, the Treasury. This clearly crucial for the level the financial deficit. In fa judging by the readiness of co panies to shed large sections their activities, it seems pre-able that substantial destocking cannot be very far nff.

In the City, and the stor market in particular, forecast do not seem to be quite bleak. Thus the latest view c brokers Phillipa and Drew 1; still that total pre-tax profits. will fall by nn more than 5 per cent in 1980. But this figure relates to the historical cost profits reported by all listed companies, taking in not only stock appreciation but also financial and nil profits together with a large proportion nf overseas income. As IC showed last week, oil is boost ing the returns nf not only the specialised oil companies.

Protected sectors

Moreover there are man domestic sectors, like brewerie or parts of the retailing trade which are fairly easily able pass on higher costs (in th absence of price controls) and are protected from foreign com-petition. In any case, some forecasters are still expecting consumer spending to rise a little this year. It is, in the main, the manufacturing sector which is facing the brunt of the storm.

And the weighting of the manufecturing sector in the UK stock market is nowadays com-paratively quite small, especially after the relative weakness which was so noticeable during 1979. A once important sector like textiles, for instance, now accounts for only I per cent of the capitalisation of the FT-

Actuaries All-Share Index
If all the significant manufactrait the significant manufac-turing sectors are added together, including engineering, chemicals, electricals and pharmaceuticals, they only con-stitute about a fifth of the All-Share. To put it another way, allowing in addition that many of the companies have large overseas interests, well nver 80 per cent of the UK equity market is out of the

direct line of fire.

Labour's Left challenges MPs

BY ELINOR GOODMAN, LOBBY STAFF

In 1978 two plastic materials used in packaging, low-density polyethylene and polypropylene. were cheaper than glass containers, paper and board, tin-

In that year plastic material prices were too low to give adequate pro6ts to petro-chemical companies. The report identifies other factors influencing use of petrochemicals as opposed to tradi-tional materials. Some are

plate or aluminium plate.

unfavourable to the industry's growth. These include: • Investment costs. A switch from traditional to petro-chemical in, say, packaging might be expensive in new

equipment. Safety and pollution laws Some products have been banned. Expandable polystyrene insulation is harred in French schools because of

hre hazard. Factors favouring petro-chemicals are:

 Better bygiene standards. growing number of cial plan will cut inflation, working outside the thinks the rate will not be back growing

LABOUR LEFT-WINGERS yesto stand as independents at the Barnsley constituency Labour next election if they were not Party at the weekend which prepared to stand by party conference decisions.

could make it impossible for Mr. Roy Mason to he re-selected

for changing the party's rules tively prevent many Lahour Mr. Les Randall, CLPD chair-MPs standing under the Labour man, said yesterday that

The Campaign for Lahour by his local party as candidate Party Democracy, the pressure for the constituency which be group which claims responsi- has represented for 27 years. bility for baving persuaded the Failure to he re-selected last party conference to accept might provoke Mr. Mason into the idea of mandatory re-selec- standing as an independent - so tion of MPs, published proposals resulting the kind of split in which, if enforced, would effec. MPs oread.

the party which most Lahour

Labour MPs who wanted to pu

Publication coincided with a coosistently independent point terday challenged Labour MPs successes by the Left in the of view should stand as independent candidates.

His campaign's proposals are designed to ensure that party candidates toe the official party line. Under them, all candidates would bave to sign an official declaration that they would abide by party policies and the Parliamentery Labour Party would have to produce a detailed report of its activities for the approval of conference each

Behind the Barnsley "wipe-out," Page 6

Iwo years recession

above £8bn A striking feature of the forecasts is the belief that at best
it will take several years for an last four.

for the next four years are considerably worse than for the 1981.

A similar view is taken by a

through a medium-term finan-

It warns that the prospects between 350,000 and 400,000 this

Continued from Page 1

improvement to occur. The Institute believes that unnumber of leading City

Even the Business School, less present policies are analysts. Stockbrokers Phillips
which believes that tight conchanged there is a possibility and Drew produce projections of a gradual but irresistible drift this morning in line with those into selective import controls.

All the forecasters expect unurge the Chancellor to belp employment to continue to rise companies by reducing em-throughout the first half of the ployers' national insurance

Plan to boost EEC spending in Britain

Britain might withhold pay- British ments to the EEC if its Budget removed. demands were not met.

ahly unnone hy her threat. Britain's Periodnent Representative with the EEC tried to persuade other EEC ambassadors to adopt a harder line and France regard the lamb

against EEC outter sales to the This irritation could also ground count against the UK at today's The

A TEAM of senior British stantially more than the £350m believed to have responded subsidies to French sheep officials, led by Sir Michael offered to Mrs. Margaret coolly to Mrs. Thatcher's sugfarmers to offset a drop in Palliser. Permanent Under Thatcher, the British Prime gestion on BBC Television that prices once illegal curbs to lamb imports are

Most EEC members support Brussels officials said any Britain's insistence that France progress at Mrs. Thatcher's should obey a European Court talks with Herr Schmidt in of Justice ruling and drop that London last Monday was prob- curbs. But they are clearly fed up with the prolonged dispute, More general irritation with the UK surfaced later in the week when Sir Michael Butler, Britain's Permonent Representation to accept a temporary

isue as negotiating capital in Soviet Union. He received an the larger budget dispute, emphatic, and unanimous "No." neither is likely to give much The Farm Ministers are

meeting of Farm Ministers in expected to review the com-Brussels. The commission, in mission's proposals for this They sisn hope other EEC Chancellur Helmut Schmidt, an attempt to defuse the Feet's farm prices, though no government heads will be pre- of West Germany, whose suppared to allow Britain sub- port is essential to Britain, is will propose paying temporary before early summer.



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